

The New PUBLIC HEALTH

**An Introduction to Personal Health
and the Welfare Services for
Health Visitors, Social Workers and Midwives**

by

Fred Grundy, M.D., M.R.C.P., D.P.H.

*Seventh Edition
(Reprinted)*



THE NEW PUBLIC HEALTH

The forerunners of the present volume, which initially carried the title "Handbook of Social Medicine" have passed through twelve editions and have been widely used for over twenty years. During this period the National Health Service has been consolidated, social security provisions and welfare services have been substantially enlarged, and amended concepts of social-medical care have found expression in the range and form of services now available. In particular, screening procedures for selected groups have become an accepted aspect of medical care, the treatment of mental disorders has been largely assimilated to general medical care, and "treatment in the community" has achieved a new prominence.

In the present book the author gives an account of socio-medical services in clear and simple language, outlines the legal provisions under which they are administered, and refers them to their recent historical background and the broad principles on which they are founded.

There are also chapters on the control of the communicable diseases and health statistics and a number of useful appendices. The book is intended to provide a relatively concise account of non-hospital medical-care and welfare services which is suitable for health visitors, midwives and a wide range of social workers.

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THE NEW PUBLIC HEALTH

AN INTRODUCTION TO PERSONAL HEALTH AND THE
WELFARE SERVICES

for Health Visitors, Social Workers and Midwives

By the same Author

PREVENTIVE MEDICINE
AND PUBLIC HEALTH

*An Introduction for Students
and Practitioners*

Fifth Edition

The New PUBLIC HEALTH

AN INTRODUCTION TO PERSONAL HEALTH AND THE
WELFARE SERVICES
for Health Visitors, Social Workers and Midwives

By
FRED GRUNDY

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in the University of Wales.

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PREFACE

In 1944 I wrote "A Handbook of Social Medicine", based mainly on courses of lectures given to pupil midwives over a number of years. This modest work reached a fifth edition in 1948, and in 1959 was enlarged and published under the title "The New Public Health", whose sixth edition appeared in 1965.

The present volume, though based substantially on the earlier works, has been written afresh. The sub-title "Personal Health and Welfare Services" has been added better to describe its scope and contents. Like its forerunners it is intended primarily as an introduction for midwives, health visitors, social workers and others who need to be acquainted with the objectives and structure of social-medical services.

After a general introduction to the problems of health maintenance, disease prevention and health administration, much of the book is devoted to a consideration of social-medical services other than hospital services, i.e. to care in the community. In the chapters relating to these subjects I have tried to present a succinct but balanced account of the services now provided in England and Wales. In the many references to statutes and regulations I have endeavoured as a rule to convey the substance of the law in ordinary language, assuming that readers who need to interpret and apply legal provisions will wish to refer to the actual texts of Acts, Orders and Regulations as required.

Some chapters or sections can well be omitted by certain classes of reader, and suggestions to this effect are made in appropriate places, e.g. in references to the revision of local government, the control of infectious diseases, and midwifery services. On like grounds, a number of important but circumscribed subjects have been relegated to appendices when this could be done without impairing the main text.

I am indebted to many colleagues for advice and assistance, to the reviewers of earlier editions for their valuable suggestions, and to the publishers for the care they have taken in producing the book.

I shall be indebted to readers who are good enough to draw my attention to any errors which may inadvertently have crept into the text and to anyone who cares to make suggestions for improving future editions.

F.G.

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CHAPTER I

GENERAL PRINCIPLES AND TERMINOLOGY

Much of this book is devoted to the organisational structure of the health and welfare services which are in operation at the present time in England and Wales. A knowledge of these services is needed by doctors, health visitors, midwives and others who work in them professionally. For the student of the social sciences, the organisational aspects of public services is familiar ground, but for medical and allied workers whose concern has been mainly with the clinical-pathological problems of patients, administration is a strange and alien world which needs a word of explanation.

It has been said that psychiatry is "the other half of medicine", and everyone knows what is meant by this. The statement is true, however, only if the reference is to clinical medicine. Somatic medicine and psychiatry are, so to speak, the two faces of a single coin whose denomination is medical science and patient-care. In a wider context, *this* is one half of medicine. The other half, with which this book is mainly concerned, is the logistics of the delivery of medical and social services to patients, or more generally to those who need them.

That it is as important to ensure that services are made available when and where they are required, as to ensure that they are sufficient in volume and quality is self-evident. And to do this for the whole community requires organisation on a nation-wide scale, or at least as a large-scale enterprise, using health personnel of various grades in large numbers, each with their own special training and range of duties, and each with a knowledge of the organisational structure of the services provided. Without this knowledge the individual worker cannot play his allotted part effectively.

That the health and welfare services in Britain are complex and sometimes ill-adapted to present-day requirements will become apparent as our account of them unfolds. It is helpful to remember that the services in their present form were not designed according to a logically-coherent plan. On the contrary, they grew out of, and were superimposed—often *ad hoc*—on pre-existing services intended to meet a variety of needs in the very different circumstances of the past. It is for this reason that reference is made in later pages to the manner of evolution of various services in recent years. Without an historical approach, their present form often does not make sense.

This is not all. The services which now exist should not be thought of as fixed and immutable. The present form of many services is a working compromise—often an uneasy compromise—between the limitations imposed by the past and the beckonings of tomorrow. The comments we shall make in later pages on trends in administration and medical practice will help the reader to view existing services in this light.

THE NOTION OF SOCIO-MEDICAL CASUALTY

Many of the services we are about to consider are provided for the benefit of people, who for shorter or longer periods cannot maintain their normal independence in the community without assistance or advice beyond the resources of the family group. A person who falls ill, for instance, and needs medical care and attention, is in this situation, and may be said to be a medical casualty. Likewise, an able-bodied worker who loses his job because of a change in industry completely outside his control is an example of a social casualty. The mother with young children who loses her husband and the child who loses his parents are other obvious examples. There are, then, medical and social casualties pure and simple, but circumstances which are a combination of medical and social problems are far more common. The handicapped person and the old person without family who is also infirm or ailing are typical examples. Delinquents and criminals are in a somewhat different category and are not within the scope of our considerations, but this does not apply to the not inconsiderable groups whose behaviour is merely anti-social. The feckless and work-shy, the tired Tims and weary Willies, the shiftless who cannot or will not cope are also among the groups who make demands on, or who require one or more of the social services we shall later consider. They, too, are often socio-medical casualties who require outside aid either for their own benefit or for the good of society.

Because of the diversified character of their problems a wide range of services is needed by social-medical casualties. In general terms, however, services under the general heading of welfare services fall into three broad categories.

- (i) Financial assistance—cash benefits and grants under the Social Security Scheme.
- (ii) Non-medical advice and material help—assistance in kind, housing accommodation—often under the Welfare Services.
- (iii) Medical care—under the National Health Service.

The reader will find it useful to bear this classification in mind when studying the details of the various welfare services, as will the case-worker when called on to decide what assistance is needed by the individuals and families whose problems she has to review.

NOTE ON TERMINOLOGY

It will not have escaped attention that the word "welfare" has been used in two different senses.

In a general sense, the expression "welfare services" refers to the range of services provided under social security schemes, medical care, the care of the non-sick in adverse circumstances and in particular, the material aid provided for the aged, the homeless and the handicapped under Part III of the National Assistance Act. Education, probation services and a wide range of voluntary services are also included by some.

Distinguished by an initial capital, "Welfare services" has a more restricted meaning, namely to refer to the services under Part III of the National Assistance Act.

The word "welfare" also appears in the expression "child welfare", where it relates to the socio-medical care of infants and children under five years of age in child welfare clinics, and in the home by Health Visitors.

The expression "Medical care services" denotes services for personal medical care given by doctors and allied personnel. It embraces care of the non-sick as well as care of the sick. The abbreviation "Medi-care" is sometimes used.

A "Health Service" comprises medi-care services, environmental health services, medical statistical services etc. (see below).

"Health personnel" includes medi-care personnel, public health inspectors, sanitary engineers, medical statisticians and veterinarians.

The expression "auxiliary personnel" refers to trained workers with less than full professional training who assist professional personnel in their professional work and work under their supervision, *e.g.* assistant nurses; dental hygienists. In this sense, there are no medical auxiliaries in Britain.

There are, however, trained workers in the National Health Service who were originally referred to as medical auxiliaries and who are now said to belong to professions supplementary to medicine: *i.e.* physio-therapist, radiotherapist, hospital dietician, laboratory technician, orthoptist, almoner (medical social worker), radiographer, chiropodist, speech therapist, occupational therapist and psychiatric social worker.

"Ancillary personnel" are those who work in service in some capacity other than professional, *e.g.* ambulance drivers, clerical staff.

Nurses, midwives, pharmacists, health visitors, etc. who work with doctors engaged in personal medical care are often referred to as paramedical personnel.

THE SCOPE OF MEDICAL CARE

As the great majority of doctors work either in hospitals to which sick people go for investigation and treatment or in general practice where the doctor is consulted almost entirely by the sick and ailing, it is not astonishing that "medical care" is commonly thought to be virtually synonymous with "medical care of the sick". This view is based on a misconception. Medical care should properly be thought of as comprising:

- (1) the maintenance of health;
- (2) the prevention of sickness;
- (3) the diagnosis and treatment of disease;
- (4) the restoration of the sick and disabled to the best possible health (*i.e.* rehabilitation).

Examples of promotive and preventive medical care are readily found in the work of child welfare and ante-natal clinics, the school

health service and the national programme of immunisation and vaccination, to say nothing of the vast amount of informal advice on personal hygiene given by doctors in the course of clinical consultations. As these aspects of medical care are enlarged upon in many places in later pages no elaboration will be made at this point.

HEREDITY AND ENVIRONMENT

The next step in our introductory argument is to indicate that notwithstanding the importance of personal preventive measures in clinical practice we must look largely elsewhere for the ways and means of safeguarding health and preventing disease on a large scale. To do this we must consider briefly what are the factors or circumstances which favour health or contribute to the causation of disease. We begin with a word about hereditary or genetic factors.

Individuals differ from each other physically and mentally, and thus in their state of health, as a consequence of interactions between their genetic constitutions and the environments in which they live. A few serious diseases and deformities are, so far as we know at present, attributable entirely to heredity. Among them, for instance, are conditions such as haemophilia, some forms of idiocy, certain types of dwarfism, and some malformations. Some diseases and malformations are ascribable to single genes, *e.g.* neurofibromatosis and xeroderma pigmentosum, whereas many constitutional diseases have a hereditary component which is the expression of a great many genes in combination, *e.g.* diabetes, pernicious anaemia, and idiopathic epilepsy. Heredity also plays a part in determining the magnitude of many attributes possessed by all human individuals—attributes such as physical stature, length of life, fertility and level of intelligence. In these instances also the hereditary influence is due to many genes in combination.

In the final analysis, inborn qualities of body and mind are factors of importance in the aetiology of most diseases and inadequacies, but for purposes of prevention and control they cannot as a rule be taken in practical account. In Chapter 6 reference is made to genetic counselling and to the control of an inborn defect of metabolism, but with these and a few other exceptions human genetics is not yet a basis for health programmes. Despite the remarkable advances of the last decade, human genetics is still largely at a research, rather than an operational stage of development. The conclusion to be drawn is that the prevention of disease and the maintenance of health depends mainly on the control of one or another aspect of human environment. It is upon environment that attention is most profitably concentrated.

In ordinary language when people refer to “environment” they mean the physical surroundings of the human body after birth or, in other words, the climate, housing conditions and so forth, in which people live. For scientific purposes, however, environment includes everything that is not inherited. It includes the food we eat (nutrition), as well as the air we breathe. It includes the cultural setting of our lives as well as housing, sanitary services and the physical conditions at

work or school. Or, as we say, it has physical, biological and social aspects.

It includes also the environment before birth, *i.e.* the pre-natal or intra-uterine environment and the intra-natal environment, as well as the environment after birth.

THE BASIS OF HEALTH

It is difficult enough to define or measure the health of a community; it is far more difficult to define individual health in terms of objective standards or to grade it according to any arbitrary scale. This is hardly astonishing as the concept of health is extremely complex and varies according to sex, race and local standards; and varies for the same person in childhood, adulthood and old age. As, however, the meaning of health is well understood, the difficulties of definition need not trouble us unduly. By common consent, a person in health is free from disease; and positively, he enjoys a state of wellbeing and vigour and the ability to make adjustments to the changing circumstances of life. It is hard to improve on a concept embodied in the Charter of the World Health Organisation where health is defined as "a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity".

As everyone knows, personal health depends partly on ensuring a healthy environment and partly on the way the person conducts himself in his daily life.

To consider first the physical environment. Over an extended period, everyone needs for physiological health a sufficiency of food, shelter, warmth, air, water, and a balance of exercise and rest. Or in somewhat more formal terms, the physical components of a healthy environment include:

- (1) A health standard diet.
- (2) Good housing.
- (3) Healthy working conditions.
- (4) Facilities for the healthy use of leisure.
- (5) Sanitary services.

With the exception of housing, to which reference is made in Chapter VII, the physical aspects of climate, clothing, thermal comfort, nutrition and diet, atmospheric pollution and so forth do not lie within the scope of the present work. For an account of these subjects, the reader is referred to suitable texts elsewhere. Here it is only necessary to add a word about the character of many environmental changes to which man has to make biological and social adaptations in the modern World.

We live in a World which man is rapidly urbanising, a World in which higher material standards of living in many countries are accompanied by more intense competition and new strains on individuals and families. These, in turn, beget widespread social and emotional instability.

We live in a World in which man is rapidly enlarging his effective environment on the surface of the earth, in the air, under the seas and in nearby space.

We live in a World in which man is tampering with biological and physical events in a big way, often with a limited knowledge of the long-term consequences.

The widespread introduction of man-made sources of ionising radiations, atmospheric pollutants, food additives, pesticides and a wide range of new drugs are features of the physical (which includes the chemical) environment in which we now live. Tobacco and alcohol, too, have to be added to the list of agents which have become large-scale hazards to health.

In a wide interpretation, the biological environment includes all living things, plant and animal, in the human ecological situation. For our purposes, however, it refers mainly to micro-organisms which cause disease.

A word now about the second factor which determines health—the way in which available resources and facilities are used. In some respects, this is of greater practical importance to the socio-medical worker than the resources themselves, for only rarely can the habits and conduct of individuals be left out of the account.

At one end of the scale are provisions which demand little of the individual. Sanitary services, pure water and safe foods are assured for the entire population. These fundamental requisites for health are community responsibilities which the individual cannot, and is not required to do much about.

At the other end of the scale stands bodily exercise. There are few who could not by one means or another exercise their bodies to the modest extent needed to avoid health deterioration. Yet, many fail to do so. The choice between aimless lolling and activity, between walking occasionally and always using a car or bus depends, as a rule, far more on personal choice than on opportunity.

An example between the extremes is dietary. While it is true that in a complex society a person whose income is too low to enable him to buy sufficient food of the right kind cannot, however careful, provide for himself a health-standard diet, the converse is not true. Even someone with means to spare is not thereby assured of an adequate diet. Sound household budgeting, selection of the right foods in the shop and market, skilful cooking and the avoidance of gross waste also affect the issue. No public provision can prevent people from smoking and drinking to excess and going short of food. No more can they prevent some people eating to excess and becoming overweight, to the detriment of their health.

Such commonplaces as these may well seem trivial. Yet, excessive drinking and cigarette smoking, sloth and immoderate eating—all to some extent within the individual's own control—are among the biggest causes of indifferent health, and contribute to a deal of serious disease.

Disease Prevention and the Environment

No disease is attributable to a single cause. For instance, even the development of an infectious disease due to micro-organisms which attack the body from outside depends partly on the resistance or immunity of the individual who is attacked. Consequently, there are alternative ways of protecting the individual against infection. The resistance of the individual may be raised by artificial immunisation, or on the other hand, steps may be taken to reduce the risk of infection. Similarly, someone who is allergic to a pollen may be protected either by excluding the allergen from his environment, or by desensitising him.

The prevention of infectious diseases by immunisation methods and environmental controls is the subject of Chapter IX. Here, mention will be made of certain general principles which govern the prevention of disease by controlling environmental factors.

Disregarding personal preventive measure, the prevention of a disease is achieved by barring the operation in the outside World of some essential factor(s) in the disease situation.

From this point of view, there are two categories of disease:

- (1) those whose control is technically feasible because sufficient is known about their cause, and
- (2) diseases of unknown, or doubtful aetiology.

Because of their special character and frequency, mental disorders are usually considered separately.

When a disease can be attributed to an identified, specific cause such as a micro-organism or a chemical poison, the problem, though often far from simple in practice, is usually relatively simple in theory.

To take a concrete example, the prevention of a disease known to be due to an industrial poison or dust, is prevented in one or more of the following ways:

- (1) The abolition of the hazardous process, or the substitution of a process which does not create a health risk.
- (2) Keeping the noxious agent from the worker, or the worker from the noxious agent. Provision for working at a safe distance from the agent, exhaust ventilation to carry away dust or fumes, shields, face masks, protective clothing and washing facilities are among the measures commonly used in industry.
- (3) Controlling the exposure or dosage by taking the worker off a hazardous job in good time. This is done by defining a permissible dose which must not be exceeded, and examining the worker at regular intervals to estimate the dose he has received.

The application of similar principles in the community, varied in detail according to the disease and circumstances in question, is the basis of the environmental health practices discussed in earlier pages.

THE SOCIAL ENVIRONMENT

The social environment might be defined as the situation arising out of the relationships between individuals, ranging from the mother-child

and family relationships at one end of the scale, to relationships at work or school, in communities or nations or even in groups of nations joining in some common purpose. It includes tradition, cultural patterns and the control of conduct by law and other regulatory systems.

Social health and mental, or emotional health have a great deal in common. Mental health implies a sense of well-being—and a great deal besides—and like social health is influenced in no small measure by a person's relationships with other people. It is also influenced by a great many physical factors whose exact relationships with mental states cannot always be precisely stated. Nutritional and metabolic states, endocrine balance, toxic states and recent virus infections, for instance, may play a part in deciding an individual's state of mental health.

It is extremely difficult to specify with any scientific pretention the general circumstances which favour mental and social health. For everyday purposes, however, most people would agree that they include:

- (1) A sense of security within the family and the community.
- (2) Adequate self-expression, *i.e.* satisfying personal and social activities.
- (3) Affection and love, especially in infancy and childhood.
- (4) An adequate family life, or some substitute for it.
- (5) An adequate and adjusted community life.
- (6) A consistent attitude towards life, a sense of purpose, and a sense of responsibility to self, family and community.

In a social setting deficient in these respects, the individual tends to become withdrawn, to suffer from a sense of frustration, tensions, anxieties and other personality disorders accompanied by disorders of behaviour.

There are, however, many diseases for which no specific cause has been identified, and many which appear to be ascribable to several factors acting in combination. The problem of preventing these diseases is more complex. Until laboratory and other investigations have identified physical aetiological factors, preventive action must often be based on conclusions of a statistical character. A method of investigation which has been used increasingly in recent years, especially for the study of the social environment in relation to disease, is known as the epidemiological method. Originally the word epidemiology was used to refer to the study of epidemics, or the causes of outbreaks of transmissible diseases, with the aim of finding out how they were spread so that steps could be taken to control them. In recent years the method has been applied successfully to the study of non-transmissible diseases such as cardiovascular diseases and cancer and also to the study of accidents, disabling conditions, abnormalities and even to states of health. An epidemiological study consists in ascertaining how the incidence of a disease varies from place to place, from season to season, from year to year, and how it is related to age, sex, occupation, living conditions, previous illness and so forth. Sometimes such enquiries are prosecuted to provide information for planning health services or to

estimate improvements or deteriorations in community health, but their main purpose is to furnish information to assist in the prevention or control of disease. An example will illustrate the use of the method for a disease with a well-recognised social etiology. Regarded as a bacteriological problem, acute juvenile rheumatism is caused by repeated infections with a streptococcus. One way of preventing the disease would be to prevent infections directly (if this were feasible). A study of the epidemiology of the disease shows, however, that juvenile rheumatism is a disease associated with poverty and overcrowding. It is mainly a disease of the poor. Poor diet, overcrowded dwellings, large families of young children and ill-ventilated sleeping quarters favour repeated infections and a consequential high incidence of acute rheumatic disease. The fact of practical importance is that measures can be suggested for reducing the incidence of acute juvenile rheumatism even although we cannot with certainty evaluate each of the many factors involved. With improving standards of diet, better housing conditions and smaller families, the amount of acute rheumatic disease has diminished steadily in Britain since the early years of the century.

Atherosclerosis and coronary disease, which are now leading causes of death in middle age, afford further examples. Although the physical causes of these diseases are still elusive, epidemiological studies have suggested how their incidence might be reduced. There is good ground for believing that those who eat wisely, exercise sufficiently, refrain from immoderate cigarette smoking and who do not strive beyond their capacity over long periods, are less at risk than those who fail so to order their lives. The importance of personal conduct in safeguarding health is once more apparent.

GENERAL APPRAISAL OF THE HEALTH SITUATION

It will not have escaped notice that, excluding diseases caused by micro-organisms and other parasites, many diseases are, so to speak, man-made. Every society carries particular health risks. Perhaps the most glaring examples in our own society are chronic bronchitis, lung cancer, road casualties and minor mental disorders and general inadequacy. Health maintenance and disease prevention are continuing problems whose character changes incessantly with changes in the way of life and the organisation of the society in which men live.

In common with other human endeavours, the entire range of medical science and practice has been transformed by the technological revolution which has swept through the 20th century at an ever increasing pace. A greatly improved material environment for the ordinary run of people, higher living standards, antibiotics, anaractic drugs, protection against many infectious diseases by immunisation procedures, and unprecedented advances in medical instrumentation and surgical techniques are among the innovations which have made possible a standard of health never before attainable. They have also changed radically the pattern of disease in our society.

Environmental and preventive medicine have between them been so

effective that we are now in the last stages of a vast mopping-up operation to avert or control most of the great crippling and killing diseases caused by micro-organisms and other identified physical agents.

If the misfortunes of adverse heredity and the as yet unpredictable hazard of developing one of the chronic degenerative diseases are excepted, the standard of living we now enjoy and the knowledge we now possess are adequate, if wisely used, to ensure health for the great majority of people until they are overtaken by senescence. Even taking account of our ignorance of the causes of a great many diseases, impaired health and vigour are now mainly due, not to lack of knowledge, but to failures to apply the knowledge we already have. If health ranked higher in our scale of values a great many people would enjoy greater vigour and avoid much serious or fatal disease which now afflicts them. If medical science were fully applied in medical practice, *i.e.* if organisation had kept pace with technical advances, medical care would be much more effective than it is. Medicine is not unique in that human inertia, inept motivation, vested interests and misguided politics are far greater obstacles to an almost Utopian well-being than lack of know-how.

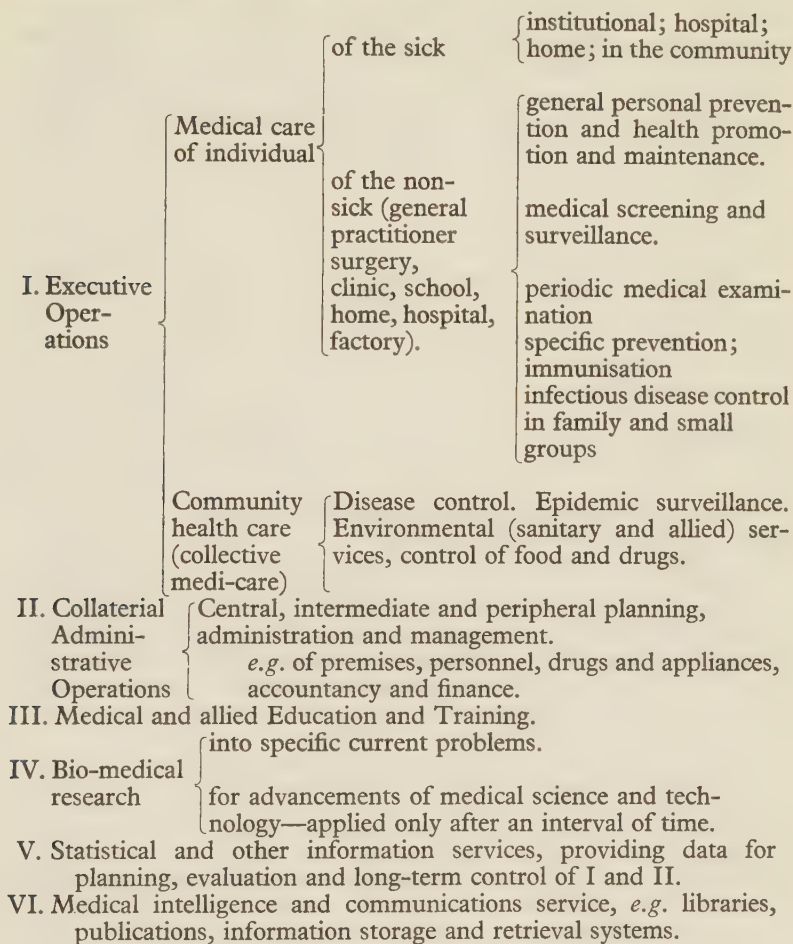
The Prevention of Mental Disorders

For a variety of reasons, compared with physical disorders, emotional disorders and social maladjustments elude scientific methods of study. Mental disorders affect the personality as a whole so that there is no presumed normal background against which they can be studied; objective methods of study are less applicable; the disturbed moods, thoughts and sensations of which the mentally disordered person is aware, often cannot be related with scientific confidence to bodily processes. And to add to the complexity of the problem, what passes as a normal mental state, or normal fluctuations of thinking and mood, varies so greatly from person to person and from time to time that definitions of disorder cannot, as a rule, be made to depend on criteria which have a wide validity.

Our knowledge of the aetiology of mental disorders is, with few exceptions, insufficient to provide a basis for specific, itemised, preventive programmes. In general, an indirect approach has to be made. Without under-estimating the value of child guidance and other forms of psychiatric counselling, the prevention of mental disorder in the community depends mainly on promoting physical and social health along the lines already suggested. Apart from this, the early recognition and treatment of departures from the individual normal is generally the best we can expect to do at present.

The Structure of a National Health Care Service

Our account of health maintenance and disease prevention in an affluent, modern society can now be supplemented by a reference to the organisational structure of a comprehensive national health service. The sub-joined scheme is proposed as a working classification of the items which the main stream of such a service would include.

A classification of Health Care Services

Alongside the main stream of services, there would also be a number of special purpose services, varying in character with the level of advancement reached by the main stream. The evolution of services in Britain has followed a typical course. There has been a progressive absorption of special services into the main general-purpose stream. Within living memory the once distinctive tuberculosis and venereal diseases services have been so assimilated; the former separate medical-care service for the indigent no longer exists; the dual system of hospitals has been unified, and so forth. There are, however, practical limits to the process of unification below the level of central planning and administration. Existing services which are in greater or less degree administered independently in Britain include notably, the occu-

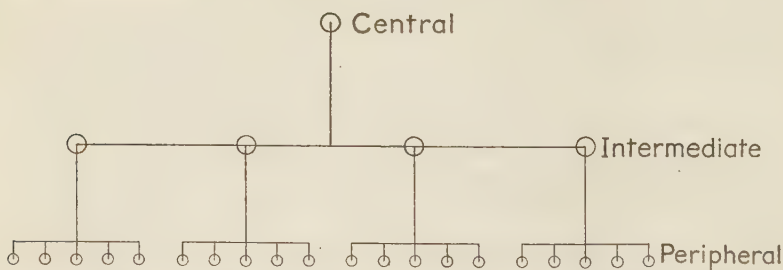
pational health service, the school health service, the prison medical service and the medical services of the armed forces.

The distinction between executive and administrative functions in the scheme requires little explanation. Executant medical-care personnel are those who, in the exercise of their professions, are actually engaged in serving the individual or the community. They include not only doctors, nurses, etc. who are in direct contact with patients, but also laboratory workers, radiologists and others who collaborate with them in a technical sense.

The contribution of administrative personnel, only a few of whom are medical and allied specialists, is to plan, establish and regulate the executive services and to manage the clinics and hospitals in which doctors and others work. They are responsible for personnel management, accountancy and finance, property maintenance and the supply of drugs and appliances.

In round figures, of the 55,000 registered medical practitioners in England and Wales some 22,000 are in general medical practice (one per 2,200 of the population), about the same number in the hospital service, some 2,000 in the Ministry of Health and the local government service and the remainder in other services cited. The great majority are practitioners or executants; a relatively small number are engaged in administration, teaching and research.

Excepting small or undeveloped countries, the typical organisational structure of the main stream of national health and social services has a fairly uniform pattern, in as much as it is organised and administered at three levels: a central or governmental level, an intermediate or regional level, and a peripheral level. This is sometimes described as a three-tier administrative.



It is useful to keep this pattern in mind when studying different organisational structures in detail, though there are many exceptions. Highly specialised services such as the virus reference laboratory is a central provision for the whole country; local government and the hospital service are partly one-tier and partly two-tier administrations; the general practitioner service has four tiers if the Health Centre is regarded as an administrative unit, but three tiers if it is treated as executive. Questions of interpretation of the sort are, however, of less importance than the relationships between the various administrative levels. There is said to be either a delegation or a devolution of powers

by higher authorities to lower authorities in the administrative scheme.

An authority is said to have delegated powers when it is empowered to act within a prescribed technical field or administrative area *instead of* the higher authority. There is said to be a devolution of administration when the lower authority acts *for, or as an agent,* of the higher authority. Thus, for example, social security provisions are administered centrally, but the functions of the central Ministry are discharged by officers of the Ministry up and down the country. In this case, there is a devolution of powers. Certain County District Councils, on the other hand, have powers which are delegated by the County Council (see page 37).

However organised, the provision of health services and supervisory services such as the regulation of food standards, the control of atmospheric pollution, water supplies and so forth, are governed by the law of the land. Authority to do things out of public funds, and to control activities and impose penalties for infringements of standards must be the subject of legislation in any orderly State. It is for this reason that a note on legislative procedures and "Public Health Law" is included in the Chapter.

Public Health and Social Medicine

Discussions on the meaning to be given to "public health" are usually less informative than taking a look at what departments of public health are actually doing. There is, however, something to be gained from a consideration of the changes public health has undergone during the last half century and the grounds on which the newer title "Social Medicine" has been introduced.

Public health has been defined as the regulation, according to existing law, of the communal physical environment to the extent that is necessary for promoting health and preventing disease. This definition was adequate, until the beginning of the present century when public health was concerned almost entirely with the control of the physical environment and in particular with the applications of sanitary science in the prevention and control of disease. The provision of wholesome water supplies, the safe disposal of sewage and dry refuse, the control of nuisances, the supervision of milk and other foods, slum clearance and the control of infectious diseases were virtually its entire domain.

During the last 50 years there have been added to the original functions of public health departments many personal health and social services, responsibility for immunisations, health education and in general, a range of activities based on the concepts of care in the community and the social environment—some would add responsibility for certain organisational aspects of general medical care. Sanitary supervision of the environment is still a fundamental function of the public health department, and no less essential than in earlier days, but it is no longer more than a fraction of the practices which "Public Health" connotes.

It will be clear that the practice of public health includes much that lies outside the province of medicine. Housing and town planning,

veterinary control, the provision of water supplies, the disposal of sewage, and large-scale food production are all important aspects of public health which lie mainly outside the scope of medical practice and in many instances outside the range of activities of medical public health specialists.

In orientation, a great deal of public health practice is directed towards disease as a community phenomenon rather than towards the individual sick person; and towards the prevention of disease rather than the diagnosis and treatment of established disorders. The expression "preventive medicine" is sometimes used to embrace immunisation procedures, the control of disease in the home and in small groups in the community and measures to safeguard people against specific health hazards. In this usage, preventive medicine is a part of public health.

The words "social medicine" might well have formed part of the title of the book, for social medicine is little other than contemporary public health (less environmental hygiene and the control of communicable disease) under a new name. The expression "Social Medicine" is justifiable mainly as a reminder of certain, now almost self-evident facts and principles, *viz*:

- (1) Medical care services are one of many categories of welfare services. They cannot be planned, organised or administered in isolation from other services or without due regard for the financial resources of the nation, political structure, cultural and religious patterns, level of industrial and agricultural development, population structure and movements, urbanisation, transport facilities, communications, and levels of education and literacy. They are part and parcel of the social and economic structure of the community.
- (2) A clinical diagnosis is rarely self-sufficient as a basis for remedial action. Patients are not only individuals but also members of families, and of industrial, educational or other groups in a highly complex society. Treatment must often have due regard for the background of the patient's daily life. The application of these principles in medical care is sometimes called "clinical social medicine".
- (3) Most sickness has social aspects which must be taken into account, *e.g.* loss of earnings by the wage-earner or infant-care problems when the mother of a family is ill.
- (4) Social services are often needed as well as medical care services in the treatment of patients and their rehabilitation, *e.g.* short-stay residential nurseries for young children when the mother is sick, or the provision of home helps in the early puerperium.
- (5) Social services are commonly needed to help maintain the health of individuals and families, *e.g.* the range of non-medical services needed by the old and handicapped.
- (6) Many illnesses have a social factor in their aetiology.

Environmental medicine, we have seen, is primarily concerned with physical causes of disease, such for instance, as industrial dusts and

contaminated food and water. Present-day public health, or social medicine studies also more remote factors in the family environment, the industrial environment and in society. Poverty, overcrowding in the home and unhygienic ways of living, for instance, are not causes of disease, but they often favour disease. They are indices of poor dietetic standards, lack of vigour and increased risks of infection, all of which predispose to certain diseases. Likewise, the health of women and the efficiency of ante-natal and child care are influenced by a variety of social factors. Social circumstances, for instance, influence the age at which couples marry, the age at which child bearing begins, ultimate family size, and in turn the use made of ante-natal clinics and place of confinement.

The following comments made by a distinguished paediatrician* on the influence of social factors on infant mortality enshrines much wisdom.

"In this stricken field of infant mortality most of the deaths have not a single cause, but a chain of causes. For example, take a stillbirth. The immediate cause is found to be asphyxia; but there are intermediate causes—prematurity and toxæmia in pregnancy; and further up the chain, general ill-health before and during pregnancy, until the first cause is found to be the poor diet of the mother. In view of the revelations of inadequate diets in pregnancy, and the suggestive reduction of stillbirth rates during the war, with its special priority provision of good food to pregnant women, there is reasonable hope that the widespread organisation of good dieting and improved general care of pregnant women will further reduce the deaths in the ante-natal group.

"Let us take another example, and this from the post-natal group. A baby two months old has died after a short and severe illness. The immediate cause of death is found to be gastro-enteritis. But preceding this obscure and deadly infection there have been a group of earlier and other causes—failure of breast feeding; mismanagement of bottle feeding; a crowded and dirty home; a narrow, sunless and dirty street; the mother employed in keeping other houses clean, and unable to dust and scrub in her own; the mother physically in poor health, dejected in spirit and ignorant of these many dangers threatening the life of her baby, and the health of her other children. In this example of infection causing an infant death there is a chain of many causes in the environment, but it leads back to the mother; to her health, her knowledge, and above all to her will and conscience; and to the concentration of all her powers on her ordained task in the home. In this example of an infant death, and its causes, the clinical aspects of the death begin with medical and pathological facts, but pass soon into the wider region of economics and social customs, and then into the central and ultimate laws that govern the life of the family and home."

The separate headings under which medical care and environmental hygiene have been presented may have conveyed the impression that they are unrelated branches of medicine. This is not so. Though largely

* Professor Charles McNeil.

separate practices in an organisational sense, they have much essential common ground.

The problem of preventing disease cannot be studied until its character and size are known, and this depends on accurate clinical-pathological diagnosis and an adequate system of medical recording. Secondly, the treatment of disease often contributes to disease prevention. The isolation of a case of infectious disease and its treatment often reduces the risk of spread. The treatment of a case of respiratory tuberculosis, for instance, is one of the principal ways of preventing new cases. Thirdly, though perhaps less apparent, the provision of medical care services for sick members of a family contributes substantially to the well-being of healthy members. Prompt treatment of a sick child spares the mother unnecessary anxiety. The medical and nursing care of old people and chronic invalids relieves other members of the family of burdens which may imperil their health. The mere presence of good medical care services in the community is an important factor in sustaining morale and maintaining mental health and well-being.

Fourthly, a patient's environment—especially housing conditions and family circumstances have usually to be taken into account in reaching a comprehensive diagnosis and in patient management.

There is then one medicine in practice, not two, consisting of a partnership between curative and preventive services. It is only because they differ in their immediate aims and the methods they employ that distinctive organisations are necessary.

Law Making and Public Health Legislation

A goodly proportion of English law is still uncodified. Its source was the established customs of the people as accepted and voiced by the Courts of Law. This unwritten law or Common Law, as it is called, still grows in volume as a consequence of decisions of the courts. But the great bulk of new law has for more than a century originated in the House of Commons, and has been promulgated in Acts of Parliament or Statutes.

It is from Statute Law, for instance, that local authorities derive their powers; and the law relating to Public Health is almost exclusively contained in Acts of Parliament or subordinate legislation whose authority derives from Acts.

The first formal step in legislation is the introduction of a Bill in the House of Commons or the House of Lords. Public Bills whose purpose is to alter the general law are almost always introduced by a Minister of the Crown on behalf of the Government. In the case of measures relating to health or local government they are introduced by the Minister of Health or the Minister of Housing and Local Government, who often publish to the House a general outline of proposed legislation in the form of a "White Paper" some time before the Bill itself is introduced. Many such White Papers have been published recently on subjects as varied as Social Security, Education, National Man-power, Employment, Use of Land, and Health Services.

The Government not uncommonly appoints a committee of experts

and interested persons to examine and report on a subject on which it proposes to legislate. The Beveridge Committee is a case in point, whose report gave birth to the National Insurance Act. From time to time, ministers also appoint committees—*ad hoc* committees, departmental committees and inter-departmental committees—whose reports are usually published as “White Papers”. For the investigation of complex issues of national importance a Royal Commission is sometimes appointed. A Commission on Local Government appointed in 1966 is a recent example (see page 38). A Royal Commission is usually a small body of selected men and women who take evidence by inviting interested bodies to submit memoranda and by hearing the views of representative experts. The Report of a Commission is printed in a “Blue Book” and circulated to members of Parliament. It is also put on sale to the public.

By means of various kinds of Reports, the Government, Members of Parliament and the general public are kept informed. The Government may, but is not bound to act on a report or to accept its recommendations.

After due notice a Bill has a first reading and a printed copy is circulated to Members. At the second reading the main principles of the Bill are discussed and if it is carried it is then referred to a Standing Committee, or to a committee of the whole House, for discussion clause by clause. The Bill is next reported to the House (Report Stage) and later has a third reading. After its passage through both Houses of Parliament the Bill is given the Royal Assent. These details of procedure are mentioned to illustrate the careful consideration given to legislative proposals before they become law. It should be noted that the paragraphs of a Bill are called clauses, and the paragraphs of an Act, sections (usually abbreviated to S. in references).

It is not usual to make detailed provision for the operation of services in the Act itself. This purpose is achieved by empowering the Minister to make regulations or orders, or by empowering some lesser authority than Parliament to make bye-laws. These are examples of subordinate or derivative legislation, since they owe their validity to the Act which authorises them. Provided they are made in accordance with the procedure laid down in the Act, they have the same force as if they were embodied in the Act itself. Provisional Orders must be submitted to Parliament for confirmation. Bye-laws made by a local authority require to be confirmed by the Minister of Housing and Local Government.

A good example of the conferment of powers to make regulations is contained in the Food and Drugs Act, 1955. S. 7 of this Act empowers the Ministers (Minister of Agriculture, Fisheries and Food and the Minister of Health) to make regulations for imposing requirements as to the labelling, marking or advertising of food intended for sale for human consumption, and the descriptions which may be applied to such food. S. 13 of the Act confers on the Ministers wide powers to make regulations about food hygiene, namely for securing the observance of sanitary and cleanly conditions and practices in connection with:

(a) the sale of food for human consumption, or

- (b) the importation, preparation, transport, storage, packaging, wrapping, exposure for sale, service or delivery of food intended for sale or sold for human consumption.

The National Health Service Act, 1946, contains many examples of sections empowering the Minister to make regulations and orders dealing with such matters as the apportionment of interests in premises, and control and management of funds, the constitution of regional hospital boards, the qualifications, remuneration and conditions of service of officers, and the transfer, compensation and superannuation of officers employed by bodies constituted under the Act.

Local authorities are empowered to make bye-laws about offensive trades, smoke abatement, nuisances, nursing homes, etc. They *must* make bye-laws about common lodging houses and slaughter houses.

Adoptive Acts do not become operative in a district until they have been adopted by a local authority in accordance with the procedure laid down in the Act. Legislation which empowers but which does not impose a duty is spoken of as permissive legislation.

A good deal of the law relating to Public Health, Education and Local Government has been brought together within a few consolidating Acts, of which the following are important examples.

Local Government Act, 1929
Local Government Act, 1933
Public Health Act, 1936
Housing Act, 1936
Factories Act, 1937
Education Act, 1944
Midwives Act, 1951
Food and Drugs Act, 1955
Adoption of Children Act, 1958

Local Acts applying to local authorities alter the law in relation to a particular locality only. They are introduced into Parliament as private Bills by a local authority, and the procedure followed is at one stage somewhat like that in a court of law, inasmuch as there is an enquiry at which contending parties state their cases. The promotion of private bills by local authorities is, however, rare nowadays. Not only is the procedure lengthy, and often costly, but in most instances it is possible to proceed by the quicker and cheaper Provisional Order. Moreover, many recent statutes, as we have seen, confer extremely wide powers on Ministers to make rules or orders for their full implementation.

Since Provisional Orders, issued by a Ministry, are often submitted to Parliament in batches before question time and acquire the force of law if Parliament has not objected within a stated period (usually a month) they are a means of effecting a great economy of parliamentary time. The procedure has its drawbacks; complaints have been made by the judiciary, and by Parliament itself, that the volume of delegated legislation in recent years has undermined parliamentary control of the executive, which is an accepted principle of our system of government.

Health personnel and social workers dealing with the problems of

individuals or families are more interested in the range of agencies which provide services in a particular field of need than in the instruments which establish them and regulate their activities.

In describing social and health services it is, however, necessary to refer to Acts of Parliament. In this book services are often described in terms of legislative provisions but the reader will find it useful to make a habit of thinking of services in relation to patient needs.

CHAPTER II

CENTRAL AND LOCAL GOVERNMENT

The Central Executive and Governmental Agencies

The Central Authority charged with the conduct of both internal and external affairs of State is the National Government of the day or the "Ministry".

It consists of the Prime Minister and numerous Ministers appointed by him, most of whom are the political heads of Government Departments. A score or so of the principal Ministers are selected by the Prime Minister to form a Cabinet which, headed by the Prime Minister, takes all the major decisions of the Government and directs its policy. The Government is responsible to Parliament for its conduct of the nation's affairs since it must have a majority in the House of Commons to remain in office. The Cabinet makes its decisions as a whole and is thus "collectively" responsible to Parliament. Ministers are individually responsible to Parliament in the sense that they speak for the Government on matters of policy within the province of their Departments and are answerable for the acts of their Departmental and other subordinates.

The Privy Council is another instrument of the Central Executive. The responsible head of the Privy Council is a Minister called the Lord President of the Council; its members are known as Privy Councillors and they have the right to use the title "Right Honourable". The main function of the Council is to give legal sanction to Executive Orders of the Government by means of Orders in Council and Royal Proclamations. Acting through certain of its Committees, the Council also has judicial functions and important functions relating to medical and other research.

The Central Departments of Government are, however, by no means the only Executive Organs of Government. A wide range of activities—especially in internal affairs—for which the Government is responsible, are commonly undertaken by subordinate bodies known as Governmental Agencies.

The most important of these so far as we are concerned are the local authorities which carry on the business of local government, and other authorities empowered to operate health and welfare services. The Regional Hospital Boards are examples. State-owned or State-controlled Public Corporations such as the National Coal Board and the Atomic Energy Authority are examples of another category of Governmental Agency.

Almost, without exception, Governmental Agencies are subject to the ultimate control of one or more Ministers of State. In particular, as we shall later consider, this is so in the case of local authorities, which though possessing wide powers, are far from autonomous.

A category of Governmental Agency with considerable authority in a specific field is the statutory body (*i.e.* a body created by Act of Parliament) charged with the duty of regulating the conduct of a profession.

The General Medical Council, the General Nursing Council and the Central Midwives Board, for example, are statutory bodies responsible for regulating the training of doctors, nurses and midwives respectively and for maintaining standards of conduct of these professions. The Medical Research Council, to take another example, is a statutory body with wide responsibilities for medical and allied research. All the bodies mentioned are subject ultimately to Parliamentary control through the Ministry of Health or the Privy Council.

Statutory bodies for the control of professions are quite distinct from professional organisations for safeguarding professional interests, voicing the collective views of their members and conducting negotiations on such matters as salary and conditions of service. The British Medical Association, the Royal College of Nursing and the Royal College of Midwives are bodies of this character and are examples of non-Governmental Agencies.

Thus:	General Medical Council	}	are statutory bodies
	General Nursing Council		
	Central Midwives Board		
	British Medical Association	}	are professional associations
	Royal College of Nursing		
	Royal College of Midwives		

The Ministry of Health and Certain Other Ministries

The Ministry of Health is the Central Government Department concerned with the administration of the National Health Service and certain other health matters, and is therefore the Ministry responsible *inter alia* for supervising the services of local health authorities in England. (The Welsh Board of Health discharges many of the duties of the Ministry of Health in the Principality of Wales.) The political head of the Ministry is the Minister of Health, who is a Member of Parliament. It is he who accepts responsibility to Parliament for the operation of the Health Services. He is assisted by a Parliamentary Secretary, who is also a Member of Parliament. The Minister directs executive action through a staff of permanent civil servants at whose head is the permanent Secretary of the Ministry.

From the date of its creation in 1919 (Ministry of Health Act, 1919), the range of work for which the Ministry of Health has been responsible has undergone many changes, expanding in some directions and contracting in others. From 1919 to 1951, for instance, the Ministry of Health was responsible for the general supervision of local government; and from 1925 to 1951 for slum clearance and housing. Since 1951, these substantial functions have been the responsibility of the Ministry of Housing and Local Government. Likewise, in 1946 the supervision of sick benefits and contributory pension schemes which were formerly a Ministry of Health responsibility was transferred to the (then) Ministry of National Insurance. On the other hand, the National Health Service Act, 1946, required the Ministry of Health to establish the now familiar comprehensive health service which added enormously to the Ministry's pre-existing responsibilities.

The wide range of services and activities for which the Ministry of Health is now responsible, do not lend themselves readily to epitomisation. Broadly, however, they include:

- I. The National Health Service and Welfare Services, including Maternal and Child Welfare.
- II. Vital Statistics, through the office of the Registrar General.
- III. Disease control, including the control of epidemic diseases.
- IV. Environmental Hygiene.
- V. The safety of food and drugs, and food hygiene.
- VI. International Health.
- VII. Medical and allied education and training—information consultation and advisory functions.

It is especially to the first item, that many later chapters are devoted. The responsibility for co-ordinating the different parts of the services, rests with the Ministry. The Chief Medical Officer of the Ministry of Health, it should be noted, is also Chief Medical Officer to the Ministry of Education and to the Home Office.

A final point that requires to be made clear is that many other central authorities besides the Ministry of Health are also concerned with health and medical matters. The Ministry of Education, for instance, is responsible for the health of the school child; the Ministry of Social Security, for certain statistics of sickness and research work; the Ministry of Labour, for factory hygiene; the Home Office for the control of dangerous drugs and the care of the deprived child; and the Service Departments for the health and medical care of the Armed Forces. The Ministry of Housing and Local Government, previously mentioned, is responsible for water supplies, sewerage and housing—all among the major concerns of local authorities and all imperatively relevant to the wider aspects of health.

The Ministry of Health is, then, the Central Department of Government responsible for the administration of the National Health Service and the other health activities cited, though by no means the only central authority whose activities have medical or health aspects.

Local Government

Before the National Health Service came into being in July 1948, public health-care services were channelled mainly through local authorities. And even now that the administration of hospital services is no longer a function of local government, the medical and social provisions made by local authorities are still extensive.

Local authorities are still mainly responsible for environmental hygiene, for a wide range of social services, including the care of the deprived child, the handicapped person and the aged and for many medical provisions affecting particularly mothers and children. Family doctor and hospital services, moreover, depend in many ways on the support of services provided by local authorities (such, for instance, as home nursing, ambulances, domestic help and health visiting), and

make increasing demands upon them. An acquaintance with the structure and functions of local government is, therefore, as necessary now as it was in the past for anyone who wishes to have a comprehensive picture of health and welfare services. For this reason, and because few people other than administrators are familiar with local government structure and function, a brief description of local authorities and their relations with government departments is given this early place in the text.

The local authority, the responsible body in each of the areas into which the country is divided for local government purposes, is a representative council constituted on the basis of votes by local residents of 21 years of age and over. Councillor members of the authority are elected for a period of three years, and one-third of their number retire each year and may seek re-election at the local polls. In some Authorities councillors elect aldermen from among themselves (or exceptionally from the body of ratepayers), in the proportion of one alderman to three councillors. Aldermen hold office for a period of six years.

In its present form our system of local government, comprising some 1,450 authorities*, is little more than a century old, and like other social and political institutions it is, and always has been, fluid. It never remained unchanged for long at once, but during the half century before the outbreak of war in 1939 steady growth and expansion were much more prominent than radical changes in its structure. During the last few years, however, the character and scope of local government have undergone many changes. Local government is at present undergoing a gradual transformation which can be understood only in the light of recent history, and it will probably be radically re-organised within the next few years. Reference will, therefore, be made both to its past and the probable future, but in the first place we shall consider local government as it now exists.

There are at present six types of local authority in England and Wales namely, County Borough Councils, County Councils, Borough Councils, Urban District Councils, Rural District Councils and Parish Councils, and a distinctive local government organisation for the Greater London area. The number of authorities of each type (at 1st April 1966) is given below.

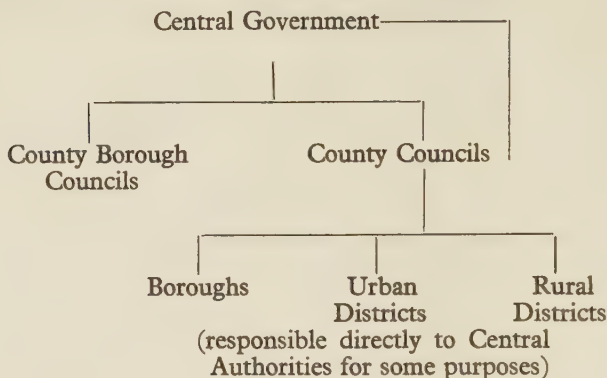
82 County Boroughs	
58 Administrative Counties	
270 Non-county Boroughs	} All known as County Districts
538 Urban Districts	
473 Rural Districts	
Greater London Council and London Boroughs including the Corporation and City of London, 34.	

A general feature of local government is an administrative structure at two levels. It is said to have a partly one-tier and partly a two-tier structure. The present tendency is for a two-tier administration to

* Not counting parish councils.

become the rule, though for many purposes a county district council is still responsible directly to the central government. The diagram will help to make this clear.

The two-tier structure of Local Government



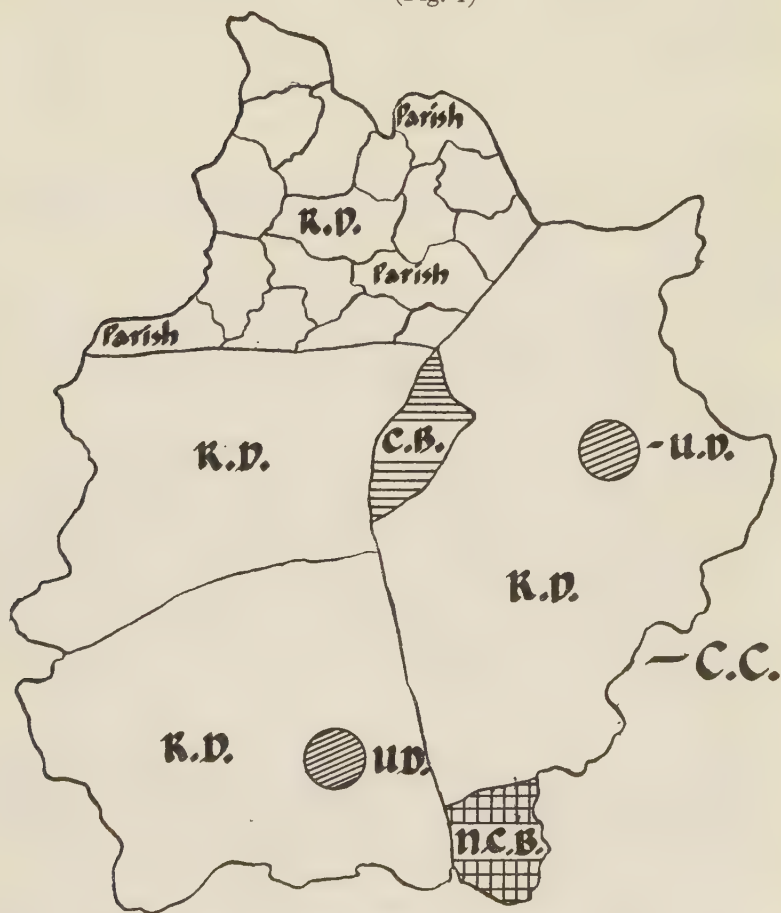
A COUNTY BOROUGH discharges all the functions of local government within its area. It is, therefore, a self-contained or autonomous unit of local government and although situated within a county is, nevertheless, distinct from the county administratively (see accompanying diagram, p. 25). Its functions include the administration of health services, primary and secondary education, housing, highways and planning, refuse disposal, sewerage, parks, and the provision of libraries and other public amenities. Health services administered by a county borough include home nursing and midwifery, mental welfare, child welfare, ambulances, sanitary control, food and drugs supervision, and the control of infectious diseases.

Since a county borough is an "all purpose" authority it is independent of other local authorities, though as a matter of convenience it sometimes makes arrangements with neighbouring authorities or with a county council for the discharge of some duties. Typical county boroughs are large towns or cities, but they vary greatly both in size and financial resources. Of the 82 county boroughs, a score or so have a population of more than 200,000, but some have a population of less than 70,000 and are smaller, therefore, than many non-county boroughs.

A COUNTY COUNCIL administers an area coincident generally speaking with that of a geographical county, but this is not invariably so. Thus, for instance, the geographical county of Suffolk is divided into two administrative counties—East Suffolk and West Suffolk—and Yorkshire is divided into three ridings. The county council is responsible within its area for all local government functions save those administered by the councils of county districts, *i.e.*, the boroughs, urban districts and rural districts which constitute the county.

SCHEMATIC DIAGRAM OF TYPES OF LOCAL AUTHORITY

(Fig. 1)



C.C. = County Council.—The outline encloses the area of the Administrative County.

C.B. = County Borough.—Independent of County for Administrative purposes.

N.C.B. = Non-County Borough

U.D. = Urban District

R.D. = Rural District

} County Districts.

Each R.D. is divided into parishes, the smallest unit of local government.

The county council like the county borough council is a local health authority and administers local government health services within its area, excepting only sanitary functions, and some aspects of health education and infectious diseases control. It is also the authority for education (including school health services) but its educational functions are commonly the subject of delegation to the councils of the larger county districts within its administrative territory.

Generally speaking, services provided under Part III of the National Health Service Act, 1946 and under the Education Act, 1944, are administered by county borough councils and county councils (sometimes referred to as "major" authorities).

NON-COUNTY BOROUGHs, taken as a whole, are towns with a smaller population than county boroughs, but the exceptions are many. Some have a population of more than 100,000, but many more have a population of less than 20,000.

URBAN DISTRICTS are, generally speaking, smaller townships than boroughs, though a few have a population exceeding 100,000.

RURAL DISTRICTS, as their name suggests, are larger, more sparsely populated areas containing village communities. Only a few have a population of over 70,000 and two thirds of them have a population of less than 20,000.

The public health functions of all these county districts ("minor" authorities, as they are sometimes called) are restricted to sanitation, housing, health education, certain statistics and the control of infectious diseases. Most borough councils also discharge educational functions on behalf of the county council, either as divisional executives or as excepted districts (see Education Act, 1944); and in common with other county districts they appoint members to sub-committees of the county Health Committee (known as area or divisional committees) to which the day-to-day administration of Part III Health Services is often delegated.

LONDON.*

Under the London Government Act, 1963, local government and the functions of local authorities in and around Greater London have been radically revised. Since April 1, 1965, the former London County Council (L.C.C.) and 29 metropolitan borough councils, the Middlesex County Council and certain other local authorities in the London area no longer exist. Instead there are now 32 administrative areas known as London boroughs—12 referred to as Inner London boroughs and 20, as Outer London boroughs. The area comprising the areas of the London boroughs, the City and the Temples constitutes an administrative area called Greater London, which has a council called the Greater London Council (G.L.C.). Broadly, in addition to its executive functions, the Greater London Council has planning and co-ordinating functions throughout Greater London. It has wide power to delegate any of its functions to any London borough council or to the Common Council of

* See London Government Act 1963 (H.M.S.O. 15/-)

the City. The London borough councils and the Common Council are the authorities for the Public Health Acts and related Acts. They are the local authorities under the National Health Service Act, 1946, and for the purposes of the National Assistance Act, 1948. They are also the children authorities. The Greater London Council is the Local Education Authority for the Inner London education area whereas for the Outer London boroughs the borough councils are the local education authorities.

THE CONDUCT OF LOCAL GOVERNMENT

Let us next enquire how local authorities, ranging from large and formal assemblies to small groups of men engaged in relatively informal discussions, conduct their affairs. At the outset it should be made clear that local authorities are not at liberty to conduct affairs entirely according to their own wishes. Their constitution and procedure are largely prescribed by Act of Parliament (*e.g.*, Local Government Act, 1933) and consequently bear the stamp of a nationally approved pattern, no matter how much they may be varied to suit local circumstances.

The business of the year begins with the appointment of a chairman to preside over meetings of the council. In the boroughs he is known as the Mayor or Lord Mayor, in other authorities as the Chairman. A council next proceeds to elect from among its members a number of committees and to define their duties. They may be many or few, large or small; they may include for some purposes every member of the council; they may, and in some circumstances they must, include persons who are not members of the council (co-opted members). With the exception of financial matters, which may not be delegated to committees, it is usual to empower individual committees to act on behalf of the council for defined purposes. But, apart from delegated powers the recommendations of each committee require the approval of the council itself to acquire the force of council resolutions. Certain committees, such as the Watch Committee, are given powers by Statute to act in some matters independently of the council.

There is no necessary uniformity about the constitution of committees and the duties assigned to them, but subject to local variations the following list is typical of most major authorities.

- Health Committee
- Care of Children Committee
- Welfare Committee
- Education Committee
- Finance Committee
- Parliamentary Committee
- Highways and Bridges Committee
- Housing and Planning Committee
- Lighting and Cleansing Committee
- Fire Service Committee
- Libraries and Museums Committee

Watch Committee, or Standing Joint Committee in counties (Police Matters)

Water Committee (C.B.)

Sewage Committee (C.B.)

The council itself exercises a co-ordinating function over its several committees, debates matters of major policy, and exercises a critical supervision of committee work by question and answer in meetings at which the public and the press are present.

The first business of a committee is to elect a chairman, who during his year of office submits reports of his committee to meetings of the full council for approval. He also answers questions raised in council about his committee's work. The procedure in committee is usually less formal than procedure in the council chamber, and it is in committee that the bulk of the detailed work of the council is done. The committee's work is commonly divided amongst a number of sub-committees, which submit reports to the parent committee for approval. Not infrequently, for instance, maternity and child welfare, control of ambulances and the care of the tuberculous, etc., are undertaken by sub-committees of the Health Committee; and the arrangement has much to commend it.

In effect, the local authority is a corporate body responsible for policy decisions and the general direction and supervision of activities within its province. The implementations of the authorities' decisions and instructions is done by permanent officers of the authority working under their general direction and supervision. Chief Officers, such as the Clerk to the Authority and the Treasurer have duties of a general, administrative, legal or financial character; others are in charge of departments which provide particular services for the local population. The departments correspond broadly to the committee structure already indicated. Thus, there is a Health Department whose chief officer is the Medical Officer of Health, a Children's Department whose chief officer is the Children's Officer, a Welfare Department whose chief officer is the Welfare Officer and an Education Department headed by the Director of Education, and so forth. The functions of the Health, Children's and Welfare Departments of local authorities are considered in later chapters, but it is convenient to refer here to certain chief officers of local authorities.

CERTAIN PRINCIPAL OFFICERS OF LOCAL AUTHORITIES

THE CLERK: The Clerk to the County, the Town Clerk, or the Clerk to the District Council, as the case may be, is the officer who transacts the official business of the council with other bodies. He it is who enters into contracts on behalf of the authority; it is through his hands that all important official communications pass; it is he who makes contact with government departments and other local authorities. In his department the business of the council and its committees is arranged and his is the responsibility for convening meetings and keeping a record of council proceedings known as minutes. Internally, he

co-ordinates the work of the many departments at an executive level and brings other principal officers into conference as the need arises. He is usually a barrister or a solicitor and he acts as legal adviser to the council and assists his fellow officers in legal matters relating to their departments. He advises the council on matters of broad policy and procedure. His influence is great, and a wise, experienced clerk is a priceless asset to an authority because of the key position he holds.

THE TREASURER is the Chief Financial Officer whose duty it is to receive moneys due to the authority and to make payments on their behalf. He advises his authority on matters of financial policy, remuneration and superannuation of officers and servants, and prepares estimates of expenditure in collaboration with other chief officers. As almost every activity has a financial aspect, the Treasurer is a co-ordinating officer second in importance only to the Clerk. His department is able to give valuable assistance to the health and other executive departments whose service to the public is more direct and obvious, but whose efficiency depends a good deal on the aid given by the co-ordinating departments.

THE SURVEYOR, like for instance, the Transport Manager, the Director of Education and the Medical Officer of Health, is the head of a department more directly concerned with the satisfaction of the community's physical needs than are the departments of the Treasurer and Clerk. New construction and the maintenance of existing buildings, sewers, housing, and planning are dealt with by his department. It is through the surveyor's department as a rule that joiners, plumbers, bricklayers and other skilled tradesmen are directed to repair a broken window at a school, clear a blocked drain at the clinic or mend a burst pipe at the midwives' hostel. The surveyor's department is indispensable in an immediate sense to the operation of many other departments and certainly to a Health Department responsible for clinics, nurseries and other buildings. One or more architects are usually employed by large authorities, often in the department of the surveyor, but in the case of the biggest authorities under the direction of a senior architect at the head of a separate department.

THE MEDICAL OFFICER OF HEALTH

The first M.O.H. was appointed by the City of Liverpool over a century ago, but it was not until 1872 that provincial sanitary authorities were required to appoint Medical Officers of Health to their staffs. Since then, the M.O.H. has been an accepted feature of Local Government throughout the country.

The present position is that every county, and county district council must appoint a M.O.H. holding in addition to his primary registrable qualification a D.P.H. or its equivalent. With few exceptions, wholetime Medical Officers of Health may not be dismissed except with the consent of the Minister of Health; and the whole-time M.O.H. is not permitted to engage in private practice.

For the county districts of counties, the practice is to appoint whole-time M.O.s.H. to serve a number of county districts, or to appoint

whole-time assistant county medical officers as M.O.s.H. to one or more districts.

The fundamental duties of the M.O.H. remain substantially as stated in a Memorandum published as long ago as 1925.*

"The chief function of the Medical Officer of Health is to safeguard the health of the area for which he acts by such means as are at his disposal, and to advise his Authority how knowledge of public health and preventive medicine can be made available and utilised for the benefit of the community. He should endeavour to acquire an accurate knowledge of the influences, social, environmental and industrial, which may operate prejudicially to health in the area, and of the agencies, official or unofficial, whose help can be invoked in amelioration of such influences. While he has special duties for the prevention of infectious diseases, all morbid conditions contributing to a high sickness rate or mortality in the area from these or other causes should be studied with a view to their prevention or control . . ."

Yet, notwithstanding the transfer of services which has recently taken place, the main preoccupation of the M.O.H. has been progressively dictated by the growth of administrative duties. The M.O.H. of a large authority acts not only as an adviser but also as a manager. He is answerable to his Council for the organisation of the medical, nursing, midwifery and sanitary work of his department and for the clerical and information services upon which they depend. Either personally or through his subordinates he is responsible for giving effect to the Authority's directions. For a large part of his time he is concerned with persons—with staff, colleagues, committees, civil servants, the press, and members of the general public.

Most Medical Officers of Health of major authorities and the Medical Officers of Health of some boroughs are also appointed as School Medical Officers for their areas, *i.e.* they are appointed by the Authority, as Local Education Authority or as the Education Committee to an Excepted District (see p. 80), to supervise the school health service. A few large cities separate the offices of M.O.H. and School Medical Officer.

A great deal of the time of a M.O.H. is taken up with committee work. He is mainly concerned with the work of the health committee, but his advice is often sought in connection with the activities of other committees of the Local Authority.

The routine operation of the health department, in common with other departments of the Local Authority, depends a good deal on the relationship between chief officer and committee chairman. Matters arise almost every day requiring decisions which, strictly speaking, need the sanction of the health committee or council. It is impracticable to hold committee meetings frequently, but often undesirable to postpone

* Memorandum on the Duties of Medical Officers of Health in England and Wales (other than the Medical Officer of Health of the London County Council and Medical Officers of Health of Port and Riparian Sanitary Authorities) 1925 (Ministry of Health).

action for days or weeks. It is customary, therefore, for the M.O.H. to consult his Chairman informally and to proceed within reasonable limits of discretion upon the Chairman's advice, whose action is subsequently confirmed by the health committee. Problems of policy are also discussed with the Chairman who in due course presents them to the health committee for approval. Although the only authority for these practices is custom, they work well. Without them, it would be difficult to face the problems which arise every day in a busy department.

THE PUBLIC HEALTH INSPECTOR*

Every council, other than a county council, is required to appoint one or more public health inspectors and many county councils also make such appointments. It is usual for authorities employing several inspectors to appoint a senior public health inspector who is responsible for the supervision and co-ordination of the work of district inspectors under his immediate control. The qualifying examination for public health inspectors is prescribed by statute and is governed by an independent Examination Board. The chief or senior public health inspector enjoys a security of tenure similar to that of the medical officer of health under whose general direction he works. His duties cover the whole field of environmental hygiene and include slum clearance and the reconditioning and repair of dwellings. He inspects and examines all food supplies, devotes special attention to milk processing and maintains proper checks on quality by regular sampling. He is responsible for the inspection and stamping of meat and is usually the authorised Sampling Officer under the Food and Drugs Act. He investigates all manner of nuisances and complaints of noise and deals with atmospheric pollution both industrial and domestic. The preparation of Smoke Control Areas and inspection of Offices are recent additions to his duties. It is often through the public health inspector's department that arrangements are made for the disinfection of premises, clothing and bedding, in connection with infectious diseases and infestations with lice, bugs, and other parasites. Rodent control is also under his supervision.

THE DIRECTOR OF EDUCATION advises the education committee on matters of policy and is concerned with public educational provisions in the area. Acting with the school medical officer, the director of education secures special education of physically or mentally handicapped children appropriate to their needs.

It is obvious from what has been said that at some time or other every officer of a local authority, doctor or clerk, midwife or nurse, needs to make contact with the co-ordinating departments, and senior officers such as matrons, superintendent health visitors and public health inspectors need occasionally the assistance of the surveyor's department. It is a well-tried practice that contacts are made through the head of their own department and observance of this rule avoids

* Public Health Inspector is the new title for Sanitary Inspector.

many misunderstandings and on the whole saves time. The matron of a nursery who wants an urgent repair should resist the temptation to ring up the surveyor's department. The public health inspector who is perplexed about his salary or superannuation can best make his enquiry through the medical officer of health, who will deal with the treasurer's department on his behalf. The point is essentially a practical one, and it has been mentioned because misunderstandings due to ignorance of it are not infrequent.

LOCAL GOVERNMENT FINANCE

That part of the income of county boroughs and county districts which is derived from local sources is raised by levying a local rate. A county council obtains its local revenue by claiming a contribution from constituent districts, a process called precepting. County boroughs and county districts are, therefore, known as rating authorities and county councils as precepting authorities.

Rates are not the only source of income to local authorities. They receive specific grants from the Central Government in aid of certain services such as education, police, fire, health services and housing. Some Counties and County Borough Councils whose rating resources are below the average also receive a grant in aid of their expenditure generally, called the Exchequer Equalisation Grant; the richer authorities do not receive this general grant.

Local authorities also enjoy other revenues from the rents of their housing estates and similar sources and some control trading undertakings such as municipal transport. Post-war nationalisation measures, however, have substantially reduced the income derived by local authorities from municipal trading undertakings. On the other hand, the major authorities do not have to meet the cost of hospital services and public assistance, as the Central Government now meets the cost of these services.

The Control of Local Authorities by the Central Government

As pointed out earlier although local authorities are autonomous bodies up to a point, they may do only what they are empowered by statute to do and they must do what statute law requires them to do. Their activities are subject, moreover, to control and supervision by the Central Government. The oversight of particular services such as health and education is the responsibility of appropriate Ministries, but in addition to such particularised supervision there is a central control of a more general character.

The Department of State mainly responsible for the more general control is the Ministry of Housing and Local Government, which as we have seen, has other duties with undoubted though sometimes indirect bearing on the public health and the work of the Medical Officer of Health. The duties for which this Ministry is responsible include:

- (i) general jurisdiction in regard to local areas and powers;
- (ii) financial responsibility towards local authorities;
- (iii) housing and new towns;
- (iv) environmental services including water and sewerage;
- (v) planning and the control of the use of land.

As to the first and second of these functions, the standing orders of local authorities require the approval of the Minister, their bye-laws must be confirmed by the Minister, and their power to incur expenditure is subject to strict control by his Department. They are entitled to exchequer grants subject only to their compliance with certain conditions, and they may not raise a loan without the sanction of the Minister. Loan sanction may be withheld if any projected capital expenditure does not meet with the approval of the central department. In certain circumstances exchequer grants also may be withheld, or individual members of some local authorities may be surcharged for expenditure improperly incurred. This means that they may be required to meet the expenditure out of their own pockets if the periodic audit carried out by district auditors on behalf of the Ministry reveals irregularities.

In addition to financial controls, the Minister has wide powers to institute public enquiries into the conduct of a local authority in the discharge of its functions, powers which exert a restraining influence and discourage any tendency to irresponsibility at the local level. It is also increasingly common, as we have seen, for an empowering Act to require a local authority to submit a scheme for the approval of a Minister before it is put into operation, a procedure which confers considerable powers of central control.

It would be wrong, however, to suppose that the full weight of formal powers is employed as a matter of course. With the exception of withholding loan sanction, financial control is kept in the background and other formal methods of control are used only occasionally.

For the most part local authorities work in close harmony with Ministries and settle their differences by free discussion. This is what might be expected since the central government seeks to help local authorities to the extent that wider considerations allow, and in turn the local authority endeavours to implement the intention of central departments so far as is practicable.

Perhaps most important of all, central and local authorities influence each other unobtrusively by frequent informal contacts between their technical officers. Medical officers of the Ministry of Health, for instance, who are experts in one or other branch of public medicine, advise Medical Officers of Health whenever the need arises and conversely, Medical Officers of Health keep their medical colleagues at the centre informed of local circumstances. It is at this level, by conferences between colleagues, that most differences are settled and most problems thrashed out.

Local Government Reviews and Re-organisations*

An indication of the changes of structure and function of local authorities which have occurred since 1835 is afforded by the number of Acts of Parliament which brought them about. Particularly noteworthy are the following:

- 1835 Municipal Corporation Act—named certain towns as boroughs, and empowered their councils to levy a rate.
- 1875 Public Health Act—divided England and Wales into urban districts and rural districts.
- 1888 Local Government Act—established county councils on an elective basis and made towns with a population exceeding 50,000 into county boroughs.
- 1902 Education Act—abolished school boards and transferred the local control of education to larger local authorities.
- 1902 onwards—many Acts empowering or requiring local authorities to establish a variety of personal health and social services, including school medical services, child welfare, tuberculosis, venereal diseases, laboratory services, domiciliary midwifery and care of children deprived of a normal home life.
- 1929 Local Government Act—abolished Boards of Guardians and transferred their duties (Public Assistance) to county borough councils and county councils.
- 1933 Local Government Act—consolidated and amended existing enactments relating to local government in England and Wales.
- 1944 Education Act—made county councils and county borough councils education authorities with power to delegate local administration to certain county district councils.
- 1946 National Health Service Act (see p. 39).
- 1948 National Assistance Act (see p. 53).
- 1958 Local Government Act.

It can be seen that some of the enactments, establish or amend the structure of local government whilst others impose duties on local authorities. Since 1888, a number of general tendencies in revision of structure and function of local government are unmistakable. Outstanding among them are:

1. The creation of larger units of local government.
2. The development of services for the welfare of the people in a positive sense, *e.g.*, the provision of nurseries, home helps, school meals and free milk.
3. The transfer to county councils and county borough councils of duties formerly discharged by *ad hoc* authorities.
4. A shifting of powers and responsibilities from county district councils to county councils.

* This section is intended for readers with actual or prospective administrative duties. It may be omitted, without loss, by pupil midwives, student health visitors and socio-medical field workers.

And more recently:

5. The formulation of general policy by Departments of State, leaving only the application of policy to the local authority.
6. The transfer of the control of certain services to regional or national bodies constituted otherwise than by popular election.

The first and last of these tendencies are especially important. Both are in many ways due to the realisation that highly technical and costly services are beyond the resources of small authorities—and even beyond the resources of the largest.

The creation of county councils in 1888 implied a recognition that units of local government larger than county districts were needed for the effective administration of many services, and since that date powers and responsibilities have shifted from the smaller to the larger bodies. Recently, for example, the Education Act, 1944, made county councils the Education Authorities for all purposes and abolished the responsibilities of urban districts and boroughs for elementary education; and the National Health Service Act, 1946, concentrated local government health services in the hands of the major authorities.

Until a few years ago, however, whilst a rearrangement of functions went on inside local government, the scope of work undertaken by local authorities as a whole grew steadily. The trend was towards the establishment of large authorities with wide powers. In recent years a contrary tendency has appeared; the powers of local authorities have suffered serious reductions in two ways.

First, for some years all types of local authority have been weakened by increased central control of local administration. For some years the pattern of legislation has been to direct a local authority to prepare and submit schemes—for making services available—to the appropriate Minister, empowering him to accept, modify or reject the schemes as he thought fit. There is now, moreover, a much closer supervision over the day-to-day operations of local authorities than there used to be.

Secondly, since 1946 established services have been transferred to Regional or National bodies appointed by Parliament—bodies unconnected with the local authorities previously responsible for the services. The assumption of responsibility for hospital services by the Central Government in 1948 is, perhaps, the most important instance from our point of view. It does not stand alone.

It is in this context that post-war proposals for the revision of local government should be viewed. They culminated, as we shall see, in the Local Government Act, 1958.

The post-war review of local government areas and status was heralded by the publication of a Government White Paper in January, 1945.* The Paper proposed the establishment of a local Government Boundary Commission, and a Commission with this title was duly created by Statute later in the same year. This Commission had wide

* Local Government in England and Wales during the period of Reconstruction. (Cmd. 6579).

powers and, after a comprehensive review, made proposals for far-reaching changes. The Government was not, however, willing to grant the additional powers needed by the Commission to give effect to their proposals and, in 1949, the Commission was dissolved.

Further delays to secure the revision of Local Government were in part, at least, attributable to the failure of local authorities to reach broad agreement among themselves as to what should be done, and it was not until July 1956 that the Government's policy at that time was made known. This was done in another White Paper.* This Paper, though stating that in the government's view there was no convincing case for a radical reshaping of local government in England and Wales, proposed an overhaul and certain improvements. These proposals were later embodied in the Local Government Act, 1958, which made provision for the review of local government areas in England and Wales and for county reviews. It also made provision for the delegation to county district councils of certain of the local health and welfare functions of county councils.

The main provisions for reviews are:

- (1) Part II of the Act created two local government commissions, one for England and one for Wales, to make proposals for effecting changes which appear desirable in the interests of effective and convenient local government. In England, the metropolitan area and areas specified as "special review areas" (in effect, the big conurbations of the Tyneside, West Riding, South-East Lancashire, Merseyside and the West Midlands) are excluded from the general review.

In holding a review, the Commission in question investigates the circumstances of local government in the area and consults with local authorities and other bodies concerned. They then prepare proposals and furnish copies to the authorities concerned or, if they think no change is necessary, notify the authorities to that effect. They are also required to keep the public informed. After completing their task, the Commissions report to the Minister on the review and their proposals, and the Minister may give effect to the proposals of either Commission by means of an Order which is subject to affirmative or negative resolution of Parliament.

The Act states that the Minister and the Commission shall presume a population of 100,000 to be sufficient to discharge the functions of a county borough council.

Local authorities may not promote Bills for changes of local government areas or status for a period of 15 years from the commencement of the Act. Since their creation the Commissions have made many recommendations, and a number of orders have been made.

- (2) County councils in England and Wales are required to undertake reviews of county districts as soon as practicable after the

* Areas and Status of Local Authorities in England and Wales. (Cmd. 9831)

Commissions have completed their own reviews. The Minister may require subsequent reviews to be made at any time after the expiry of a ten-year period. He may also require the Commission to hold county reviews.

Part III of the Act also contains a provision for the delegation of county health and Welfare functions to county district councils, namely:

- (1) A provision empowering borough or urban district councils with a population of 60,000 or more to make delegation schemes embracing the following functions:
 - (a) Functions under Part III of the National Health Service Act, 1946, excluding only functions relating to ambulances.
 - (b) Welfare of disabled persons under the National Assistance Act, 1948.
 - (c) Registration and regulation of private day-nurseries and child-minders under the Nurseries and Child-Minders Regulation Act, 1948.
 - (d) Functions of local health authorities relating to mentally ill and mentally defective persons, under the Lunacy and Mental Treatment Acts, 1890-1930, and the Mental Deficiency Acts, 1913-1938.
 - (e) Contributions to voluntary organisations in relation to the Mental Deficiency Acts.
 - (f) In exceptional circumstances, certain other functions including residential accommodation for the old and infirm, and the care and aftercare of the mentally ill in residential accommodation.

The procedure laid down is for a county district to give notice to the county council of their intention to make a scheme by January, 1959, and to send the scheme to the county council by July, 1959. The county council is then required to send the scheme to the Minister, who approves it with or without modification.

It also provides that the district of a borough or urban district having a population of 60,000 or more may apply to the Minister of Education for a direction constituting the district an excepted district (see p. 80). In special circumstances, other district councils may make applications to the Minister for this purpose.

The Commissions, as we have mentioned, have already completed many reviews and made many recommendations for local government boundary changes and amalgamations. A number of new County Boroughs have also been created under the Act. The work of the Commission, though a slow procedure for getting re-organisation, has done much valuable work, but this in the view of the present Government is not enough. The Government have, in fact, been led once more to conclude that the whole structure of local government is out of date and that existing authorities are of a size and structure ill-adapted

to fulfilling their functions. What was needed, the Government decided, was a Commission charged with working out rapidly a comprehensive (as distinct from a piece-meal) re-organisation of local government taking into account all the requirements of the modern world and having regard in particular to the case for regionalisation. Consequently, in February 1966, the Prime Minister announced the appointment of the Royal Commission with the following terms of reference.

“To consider the structure of local government in England, outside Greater London, in relation to its existing functions; and to make recommendations for authorities and boundaries, and for functions and their division, having regard to the size and character of areas in which these can be most effectively exercised and the need to sustain a viable system of local democracy.”

An independent Working Party on Local Government Re-organisation in Wales was set up somewhat earlier (March 1965) to work out proposals for the Principality.

What the outcome of these most recent moves will be, is clearly conjectural. It will, however, be remarkable if they fail to result ultimately in far-reaching revisions of local government structure.

CHAPTER III

THE ORGANISATIONAL FRAMEWORK OF MEDICAL CARE SERVICES AND SOCIAL SECURITY

The National Health Service Act, 1946

The preamble to the National Health Service Act, 1946, describes it as "an Act to provide for the establishment of a comprehensive health service for England and Wales, and for purposes connected therewith". The Act is certainly comprehensive, but the preamble is to some extent misleading; it is a Comprehensive Medical Service rather than a health service which is provided. The Act is designed, in fact, to provide a medical care service for everyone, free of charge at the time it is given.

Administratively, the service has four main parts:

- (1) The Ministry of Health, which has general responsibility for the service and to whom all hospitals (with a few exceptions) have been transferred.
- (2) Hospital Boards for administering the hospital and specialist services in the fifteen regions into which the country has been divided, with Local Management Committees appointed by the Boards to undertake the day-to-day management of individual hospitals or groups of hospitals in each region.
- (3) The major local authorities, styled Local Health Authorities under the Act, for administering maternity and child welfare services, home midwifery, home nursing, health centres, etc.
- (4) Executive Councils, responsible in areas corresponding generally with those of the local health authorities for administering the general practitioner services and the dental, ophthalmic and pharmaceutical services to which everyone is entitled under the Act. (See diagram, p. 41.)

Such is the broad structure of the Act, and the essence of it is that the various provisions are welded together into one service, with the Minister of Health answerable to Parliament for them all.

Each part of the Act will be examined in more detail, but first it is worth while to review the circumstances leading up to this comprehensive enactment which became operative on July 5th, 1948.

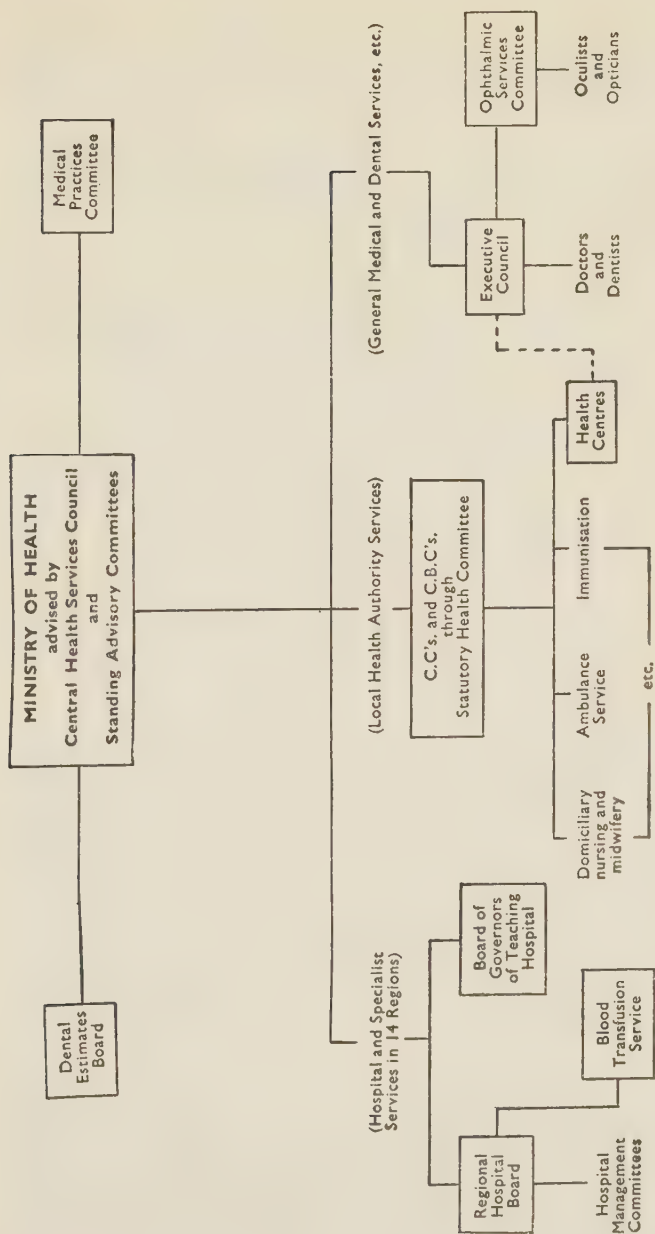
They may be described under two headings: the inevitable march of social advancement, and the requirements of social legislation. As to the first of these, though the social historian might wish to review the development of services since Elizabethan times, it is sufficient for the present purpose to make a passing reference to certain happenings during the present century.

There have been three major wars, each more expensive in manpower and materials than its forerunner. There have been dramatic and revolutionary advances in medical science. The practice of medicine has become increasingly complex, and therapy increasingly expensive. The tempo of international competition has compelled the State to interest itself more and more in the health and working capacity of the nation, to spend more and more on preventive and curative services. Statutory measures for the care of the expectant mother, the infant and the school child from 1907 onwards, measures for the prevention and treatment of venereal diseases and tuberculosis, the introduction in 1911 of a limited State service of general practitioner care and its subsequent extension, powers given to local authorities in 1929 to develop general hospital services, the establishment in 1936 of a domiciliary midwifery service—all these events point to the increasing awareness of the State of the need to preserve its resources of manpower and to maintain the health of the people. The world conflict 1939–45 underlined the facts for any who had failed to grasp the implications of conditions before the war. The cost and complexity of modern therapy, the burden of uncontrolled industrial sickness and disablement, the ageing population and the inadequacy and chaotic state of the machinery for the prevention and treatment of disease were too insistent to be disregarded by any Government.

It was not, however, until 1944 that the Government declared their intention to establish a National Health Service, and what is especially noteworthy is that the declaration when made arose out of an acceptance of certain recommendations relating primarily not to medical services but to social insurance. Whilst it is probably too much to say that the Act we are considering had its origin in a report on Social Insurance and Allied Services published in November, 1942, there is no doubt that the report of Sir William Beveridge (later Lord Beveridge) was instrumental in giving definite form to the policy of Parliament.

The Beveridge Committee had been charged with the duty of surveying national schemes of social insurance and allied services (including workmen's compensation) with a direction to make recommendations. Their Report embodies suggestions on policy which have now been expressed in a number of enactments, of which the National Health Service Act, 1946, is one.

The lengthy and comprehensive Beveridge Report states *inter alia*, "No satisfactory scheme of social security can be devised except on three assumptions"; one about children's allowances, another about the maintenance of employment, and a third about a comprehensive national health service. The third assumption was that there should be established "a comprehensive health and rehabilitation service for prevention and cure of disease and restoration of capacity for work, available to all members of the community". The National Health Service Bill, introduced into the House of Commons in March, 1946, was designed both to meet the requirements of this assumption and to be an essential part of social legislation already introduced or pending.



See diagram p. 57

Fig. 2. THE NATIONAL HEALTH SERVICE ACT, 1946

HOSPITAL AND SPECIALIST SERVICES

The British hospital system had a dual origin: on the one hand, voluntary hospitals dating for the most part from the philanthropic dispensaries established in the 18th century, and on the other, the municipal hospital system which had its roots in the Elizabethan Poor Law.

The voluntary hospitals derived their income from a variety of sources such as endowments and contributions, and latterly, from payments by local authorities. By and large they admitted and treated patients without regard to where they happened to live.

In addition to the great teaching hospitals they included some 500 hospitals with less than 100 beds. Of these, 283 had less than 30 beds.

The municipal hospitals, which came eventually to provide two-thirds of the hospital beds in the country, made their first appearance as workhouse infirmaries. At first mere sick-wards attached to the "house", they developed into a repository for the indigent chronic sick. Later, small maternity units for unfortunates "on the parish" were added. From these modest beginnings eventually came the well-organised hospital systems of authorities like the Middlesex and London County Councils and some of the big county boroughs, though in many areas Poor Law Infirmaries were the only publicly provided hospitals and fell far below contemporary standards especially in the care of the chronic sick.

Before July 5th, 1948, in addition to the dual system of hospital provision—voluntary and municipal—there was, then, a second dichotomy. Provision for the destitute was made, under laws relating to the poor, separately from the rest of the community.

From 1939 onwards an entirely new factor was introduced. The growth of the Emergency Medical Services under the control of the Minister of Health dominated increasingly the pattern of hospital administration. New hospitals were built and many existing hospitals were enlarged by the addition of hatted annexes and new buildings. Nearly every hospital in the country received substantial exchequer contributions for the military and civilian sick and injured they received for treatment. Medical staffs were paid independently of the exchequer contribution for their services in connection with E.M.S. work.

By the time the war was over it was apparent that to return to pre-war conditions was out of the question. Rising maintenance costs, increased wages, and the high cost of modern treatment would have proved disastrous to many hospitals if the war-time State grants had been discontinued.

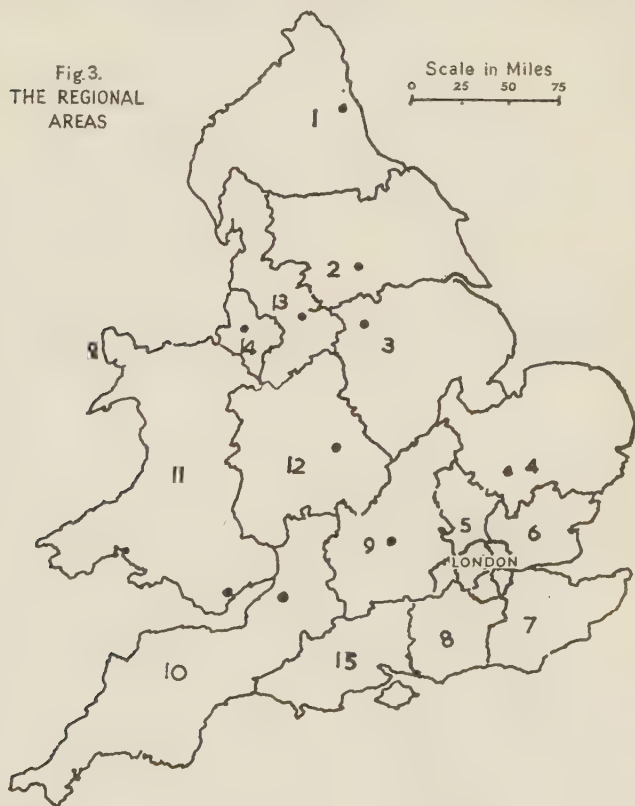
The assumption by the State of financial responsibility for hospital services was, therefore, unavoidable; and the provision of a national system of hospitals was virtually dictated by circumstances. The National Health Service Act, 1946, unified the hospital system under the control of the Ministry of Health; and it did something else no less important. It swept away for all time the distinction between treatment of the poor and the better-off.

On July 5th, 1948, the appointed day under the Act, all hospitals

(except a few disclaimed by the Minister*) vested in the Minister of Health, whose duty it then became to provide hospital accommodation and a service of specialists.

Arrangements for the administration and management of teaching hospitals differ from the arrangements for all other hospitals. Teaching hospitals are managed on behalf of the Minister by Boards of Governors who are responsible for appointing hospital staffs, and for teaching and research. All other hospitals are the responsibility of the fifteen Regional Hospital Boards, whose duties include the planning and administration of hospitals and specialist services in their area, the

Fig. 3.
THE REGIONAL
AREAS



- | | |
|-----------------------------|-----------------------|
| 1. Newcastle | 9. Oxford |
| 2. Leeds | 10. S.W. Region |
| 3. Sheffield | 11. Welsh Region |
| 4. East Anglian | 12. Birmingham Region |
| 5. N.W. Metropolitan Region | 13. Manchester Region |
| 6. N.E. Metropolitan Region | 14. Liverpool Region |
| 7. S.E. Metropolitan Region | 15. Wessex Region |
| 8. S.W. Metropolitan Region | |

* e.g. The Royal Masonic Hospital.

appointing of staff (except in teaching hospitals) and the maintenance of hospital premises and equipment. Each Regional Hospital Board is also responsible for appointing a number of Hospital Management Committees for the day-to-day administration of individual hospitals or groups of hospitals in the region.

The areas into which England and Wales has been divided for hospital purposes are indicated on the accompanying map (p. 43).

Linked with each hospital region are the teaching hospitals of the parent universities, whose Boards of Governors work in close association with the Regional Hospital Boards. There is a restricted provision of pay bed accommodation in hospitals under the Act.

A Blood Transfusion Service is maintained by each of the Regional Hospital Boards. A Public Health Laboratory Service, consisting of a network of central and peripheral laboratories, is maintained by the Ministry of Health through the Medical Research Council. The Minister is also empowered to conduct and develop research.

The organisation of specialist services, as we have seen, is a function of the Regional Hospital Boards. Consultants and specialists, who may take part in the service on a whole-time or part-time basis, have contracts with the Regional Boards and the Boards of Governors of teaching hospitals.

The hospital and specialist services cover in-patient and out-patient treatment, and the advice and services of specialists are made available in patients' homes, and at local health authority clinics and health centres.

LOCAL AUTHORITY SERVICES

Part III of the Act prescribes the duties of the new Local Health Authorities, *i.e.*, county councils and county borough councils. Upon them is laid the responsibility for the following services:

- Health visiting
- Infant welfare and the care of mothers
- Day nurseries
- Home nursing
- Home midwifery
- Domestic Help
- Vaccination and immunisation
- Care and after-care services
- Mental welfare
- Ambulance services
- Health centres

These services are considered in detail in later pages. Here we shall mention only the general administrative arrangements under this part of the Act.

Each local health authority is required to establish a Health Committee to which matters relating to health functions stand referred, and whose report the authority will ordinarily consider before making

decisions. A majority of the members of the health committee must be members of the authority.

Under the Act, the councils of boroughs, urban districts and rural districts had no health functions. It will be recalled, however, that the Local Government Act, 1958 enables County Councils to delegate many Part III functions to District Councils and even before 1958 most county health committees had secured a measure of decentralised administration by partitioning counties according to local circumstances. Sub-committees of the Health Committee (known as divisional or area committees) are commonly appointed for each area into which a county is divided for health purposes. They exercise, subject to any restrictions imposed by the local health authority, the functions of the health committee in matters of day-to-day management in their areas. Certain boroughs and urban districts have their own divisional committees. In other cases, the area is a combination of county districts. The divisional committees, *i.e.*, sub-committees of the county health committee, are constituted by the county council and include members of the county council and district council(s) with representatives of local management committees, executive councils and voluntary bodies.

A divisional committee is advised by a Divisional Medical Officer. He may be either an Assistant County Medical Officer—often also a Medical Officer of Health of one or more county districts—or the Medical Officer of Health of a borough or urban district who is appointed to the staff of the County Medical Officer in a part-time capacity.

GENERAL MEDICAL AND DENTAL SERVICES, PHARMACEUTICAL SERVICES AND SUPPLEMENTARY OPHTHALMIC SERVICES (PART IV SERVICES)

Also since July 5th, 1948, a uniform system of home medical care has been provided on a national scale. And this, too, is the culmination of recent social history.

The National Health Insurance Acts, 1911–41, established a general practitioner (panel) services for insured persons. But its scope was limited. Large numbers of workers in higher income groups were excluded from the scheme, the dependents of insured persons were not covered, and the benefits for insured persons did not include services of a specialist character. These limitations divided the community medically into two fractions, the insured and the uninsured; and this was not the only division. Separate provision was made also for the sick poor. District medical officers, usually part-time general practitioners, were employed by public assistance authorities to attend the sick poor in their homes. This outdoor medical relief, as it was called, was made available through an officer known as the Relieving Officer.

The National Health Service Act swept away both the limitations of the old Insurance Acts and the separate provision of a home doctor for the destitute. Since July 5th, 1948, everyone, rich and poor, worker and dependent, is able to have the services of a general practitioner and if

needs be a specialist under a single scheme administered by the State.

The local administration of Part IV services is undertaken by local Executive Councils, there being as a rule one council for each administrative county or county borough.

Each executive council is responsible for arrangements relating to general medical practice and the provision of a general dental service. It depends upon advisory committees—the local medical committee, the local pharmaceutical committee and the local dental committee—for guidance on professional matters.

Medical practitioners who join the public service are in contract with the executive councils. Practitioner services are provided mainly from individual or group surgeries maintained by the doctors themselves, and the doctor's contract with an executive council includes the provision of these facilities by the practitioner. Even when health centres (see p. 47) are provided by local health authorities (for the purposes, *inter alia*, of practitioner services) the practitioner's contract will still be with the executive council only. In this case executive councils enter into contracts with the local health authorities for the use of health centres by doctors practising in the area. Participating practitioners are in contract with the executive councils and not with the local health authorities providing and maintaining the centres.

Central responsibility for the service rests with the Minister of Health who has established a Medical Practices Committee to regulate the distribution of doctors in practice within the service.

Acting through their ophthalmic services committees, executive councils arrange with suitably qualified medical practitioners, ophthalmic opticians and dispensing opticians for sight testing and the supply and repair of spectacles, in order to supplement the hospital and specialist ophthalmic services.

This part of the service, like other parts, is available to every man, woman and child in England and Wales without limitation. That is to say, there is no limitation based on financial means, age, sex, employment, location, place of residence or insurance qualifications.

General practice is the principal means of providing first-line medical care of the sick, continuing domiciliary medical care and the medical care of families as a whole in so far as this is feasible in present-day circumstances. It is also the usual means of access to specialist medical services and often also to a range of social services needed by the sick and ailing no less than medical care services proper.

In 1965, 20,029 doctors were employed as principals in this part of the National Health Service. Of these, 4,838 practised as single-handed principals, 15,165 as members of partnerships of two or three and 4,030 as members of partnerships of four doctors or more. The average size of a doctor's list in the service was 2,412, half the doctors having lists between 1,900 and 2,500, whilst 2,437 had lists under 1,600 and 4,190 lists of 3,000 and over.

Although the volume of social-medical work related to the hospital service is now substantial, it is with the general practitioner service that

the domiciliary midwife, the health visitor, and other social workers employed by local authorities are predominantly associated.

Drugs, dressings and appliances also are generally provided free upon prescriptions issued by doctors within the service. They are usually obtained from pharmacists or, in the case of certain appliances, through the hospital service.

Amending Acts authorised the making of charges for dental care, dentures and spectacles. Children's glasses of standard type are still free of charge and adults who cannot afford to pay the charges may apply to the Ministry of Social Security for help.

The executive councils are also responsible for the provision of a dental service and for this purpose maintain a dental list. Since, however, there are not enough dentists to provide a complete service for everyone, a priority service of dental care for expectant mothers and young children is provided under the Act. This is in addition to the School Dental Service provided under the Education Act for children of school age.

The Act contains a prohibition on the sale of medical practices and a provision for compensating practitioners for the consequential financial losses. When a practitioner joins the national service it becomes unlawful to sell the goodwill or any part of the goodwill of his practice. The sale of the goodwill of a private practice is not affected.

The Health Centre and Group Practice

Particularly in recent years, the conditions of service and the circumstances of general medical practice have been the subjects of considerable professional unrest and dissatisfaction. There are many reasons for this, and there is general agreement that two requirements for effective general practice in present-day conditions are group practice and purpose-designed health centres. As applied to general medical practice, group practice has been defined by the Central Health Services Council as:

“Medical practice carried on by several general practitioners working together in close association, consulting one another about their patients . . . in a common building controlled by the doctors themselves. A group practice should imply ancillary help.”

This is an appropriate place to consider briefly to what extent and in what manner these requirements have been encouraged under the National Health Service Act. A fact of prime significance is that Health Centres are clearly envisaged by the Act. Section 21 placed on every Local Health Authority the duty of equipping, maintaining and staffing premises to be called “Health Centres” which were to have facilities for all or any of the following purposes.

- (1) The provision of general medical services by medical practitioners, general dental services by dental practitioners, and pharmaceutical services by registered pharmacists under Part IV of the Act.

- (2) The provision of specialist services or other out-patient services under Part II of the Act.
- (3) The provision of local health authority services under Part III of the Act; and for the purposes of health education.

The health centre as originally conceived was intended partly to overcome defects inherent in general practice, partly to bring together, at a functional level, the three main branches of the health service, and partly to relieve pressure on hospital out-patient departments and to economise hospital beds. It was thought that, by providing facilities and diagnostic aids beyond the resources of individual practitioners, health centres would raise the standard of general practice, encourage collaboration between doctors and lead quickly to group practice (*i.e.* several practitioners working together as a professional team). Moreover, the housing under one roof of general practitioners, consultants, and the preventive services of local authorities would, it was expected, lead to a better mutual understanding and enable patients to be referred easily from one branch of the service to another.

As long ago as 1920, the Dawson Report drew attention to deficiencies in general practice, and particularly to:

- (1) The refusal of general practitioners to accept responsibility for difficult cases.
- (2) A tendency to refer patients to hospital.
- (3) The lack of diagnostic aids, especially pathological aids.
- (4) Competition for patients.

The Report envisaged health centres as a key measure to remedy these deficiencies.

In the reconstruction period following World War II the state of general practice once more came under review. The great advances and developments both in medicine and in the social services reinforced the criticisms made earlier in the Dawson Report. It had become apparent that effective general practice under modern conditions must imply group practice, whose advantages include:

- (1) Economy in nursing, clerical and other assistance.
- (2) Better accommodation for patients.
- (3) Better diagnostic facilities.
- (4) A degree of specialisation within the group.
- (5) Duty rotas, and more free time for postgraduate study, refresher courses and leisure.

These considerations and the need to provide a functional bridge between the three main branches of the service, led to the concept of health centres as defined in the National Health Service Act.

The detailed planning was left to individual authorities with the suggestions that, in general, adapted buildings should not be used, that new towns and new housing estates were particularly appropriate areas

for the development of health centres, and that rural areas required special consideration. A measure of agreement was soon reached on certain essentials. For most town dwellers, the health centre should be available within a radius of half a mile, and in ordinary urban circumstances a catchment area containing some 10,000 people would usually meet this requirement. In thickly-populated areas the distance factor would lose its significance and a Health Centre could well serve a population of 20,000–25,000. In smaller towns and rural areas a centre would often have to provide for fewer than 10,000 people. Two types of health centres would often be necessary: a main centre providing the full range of services, and district centres providing only some services according to the needs of the population served.

The general provision of health centres has, however, been impeded by formidable obstacles, not least of which is the high cost of construction and maintenance.

The London County Council Centre at Woodberry Down, for instance, which serves a population of 18,000, was erected at a cost of approximately £160,000. It contains six general practitioner suites and accommodation for a wide range of local authority services and in addition a day nursery, a lecture hall for health education, and administrative offices.

In addition, opposition has been encountered from the medical profession on a number of grounds, not least because established practices do not form neat geographical entities conveniently served from a single health centre.

The advantage of health centres are generally acknowledged—and in particular, experienced people speak highly of the closer collaboration and better relations which develop not only between doctors but also between medical practitioners and midwives, health visitors and other social and ancillary workers—yet the hard fact is that relatively few have been built. Although somewhat more rapid progress has been made during the last few years than in earlier years, only 23* centres were operating at the end of 1965 with another 20 approved or under construction.

As Executive Councils have no effective powers to enable them to plan general practitioner services in their areas, and no powers themselves to provide practice premises for general practitioners, they have been unable to remedy in a radical fashion the largely haphazard and uneven distribution of practices in their areas. They have, it is true, the power to decide when vacancies in practice should be declared as the result of the death or retirement of established practitioners, and they may in certain circumstances make special payments to doctors to induce them to practice in under-doctored areas. By these means Executive Councils have been able gradually to improve the distribution of doctors to some extent, though with increasing difficulty in recent years. Since 1955, or thereabouts, the availability of suitable practice premises and the relative shortage of doctors seeking to enter general practice

* Not counting establishments in operation before 1949 and approved by the Minister of Health when the National Health Service Act came into force.

have made the task less easy. In some areas, the situation has been eased by the local authorities providing surgery accommodation in purpose-built premises for letting to doctors at economic rentals. A few authorities have provided surgery accommodation in existing local authority clinic premises. Valuable though these provisions are, they can hardly solve the problem on a nation-wide scale.

The movement towards group practice is, on the whole, much further advanced. The spontaneous efforts of many doctors to combine with others in partnership and to provide conditions of practice suited to modern medicine have been encouraged and re-enforced by financial assistance from governmental sources. In 1952, the Government agreed to set aside annually a sum of £100,000 to provide interest-free loans for practitioners who propose to form a group practice, or who having formed a group, propose to provide new practice premises or to improve existing premises. In 1966 the Government established an independent finance corporation to make loans to doctors for the purchase, erection and improvement of premises. They also proposed direct repayment to individual doctors of most of the cost of ancillary help they employ, and made proposals for salaried contracts in certain circumstances as an alternative to the capitation system. By the end of 1965, the number of group practice loans approved had reached a total of 618.

The comprehensive health centre, it would appear, is unlikely to provide a general solution to the problem of organising home medical care for many years to come, though the provision of some 300 by 1976 is envisaged in revised local authority Ten-Year Plans. The further extension of group practice, the joint use of existing clinics by local authority staff and general practitioners, the erection of small buildings for use as surgery premises by local health authorities and a variety of arrangements for bringing the practitioner and the local health authority health personnel more closely together as members of domiciliary health teams, are much more likely developments on a nation-wide scale in the near future.

MENTAL HEALTH SERVICES

Responsibility for the provision of mental health services under the National Health Service Act is, broadly, as follows:

- (1) The major local authorities, as local health authorities, are responsible for the ascertainment of mental disorder, the provision of aftercare facilities for mental patients, and the statutory supervision and guardianship of subnormal persons. The officer of the local authority responsible for securing the detention of patients for observation is the mental welfare officer.
- (2) The Regional Hospital Boards, to whom mental hospitals, mental deficiency institutions and psychiatric clinics were transferred under the Act, are the bodies mainly responsible for the hospital care of the mentally disordered and for specialist services for mental health in their Regions. This includes diagnosis, advice and treatment. Teaching hospitals also provide psychiatric in-patient and out-patient care.

The arrangements which a local health authority is authorised, or may be required, to make for mental health services are now specified in the Mental Health Act, 1959. They include the following:

- (a) the provision, equipment and maintenance of residential accommodation, and the care of persons for the time being resident in accommodation so provided;
- (b) the provision of centres or other facilities for training or occupation, and the equipment and maintenance of such centres;
- (c) the appointment of officers to act as mental welfare officers under the provisions of the Act;
- (d) the exercise by the local health authority of their functions under the provisions of the Act in respect of persons placed under guardianship; and
- (e) the provision of any ancillary or supplementary services for persons who are, or have been, suffering from mental disorder.

The Act also abolished "designated" hospitals. This means that hospital authorities are now able to arrange that any kind of hospital may receive any type of mental patient, either on an informal basis or under detention.

THE SERVICE AS A WHOLE

Thus, the main functional divisions of the National Health service are:

- (1) The hospital and specialist services administered by the Boards of Governors of the teaching hospitals and the Regional Boards (through Hospital Management Committees).
- (2) The general medical, dental, pharmaceutical and supplementary ophthalmic services, administered by the Executive Councils.
- (3) The local health authority services administered by the county and county borough councils through statutory Health Committees.
- (4) Mental health services administered partly by the Regional Hospital Boards and partly by the Local Health Authorities.

Co-ordination is provided for at three levels:

- (1) The Minister of Health answerable to Parliament for the efficiency of the whole service. A Central Health Services Council (a professional body of 41 members appointed by the Minister) and Standing Advisory Committees advise the Minister upon matters relating to the service.
- (2) At the local level, by inter-representation on governing bodies, boards and committees, and by the requirement that important developments have to be the subject of consultations.
- (3) Liaison at the executive level between officers of hospital boards, executive councils and local health authorities in relation to the day-to-day operation of the service.

Specially noteworthy are the liaison committees for maternity services which usually include the M.O.H., obstetric and paediatric specialists and a general practitioner; and the liaison committees for the care of the aged, consisting of the M.O.H., the Welfare Officer, geriatric and psychiatric specialists and a general practitioner.

COST OF THE SERVICE

The cost of the new service is great. It is mainly met from three sources: (1) state funds; (2) insurance contributions; and (3) in the case of the local health authority services, from local rates. The individual pays, therefore, for the services he receives by taxation, by his insurance contributions and through local rates. He makes payments at the time of using the service in a few instances only. A direct charge is made, for instance, for the use of the private hospital beds already referred to; and local health authorities ordinarily make a charge for providing domestic help and may require a contribution towards the cost of treatment of persons, other than school children, in certain convalescence homes and other after-care institutions. With these exceptions, and the provisions mentioned earlier—*i.e.* dental treatment, dentures, and spectacles—the service is free in the ordinary sense of the word.

The approximate cost of the service for 1964/65 and the sources through which it was financed were as follows:

<i>Cost of Service</i>	£	<i>Sources of Finance</i>	£
	(in mills.)		(in mills.)
Hospital and Specialist..	632	Exchequer	769
General Medical ..	82	Partly Exchequer and	
Pharmaceutical	116	partly Rates	132
General Dental	60	National Health Service	
Supplementary Oph-		contributions	146
thalmic	17	Payments by persons using	
Local Health Authority	102	the Service	71
All other (Administration,		Other income	4
Local Welfare etc. ..	113		
	1122		1122

The National Health Service Act provides, then, a comprehensive medical care service, which includes both the personal aspects of preventing disease and the diagnosis and treatment of established disease. With minor exceptions, the service has retained its original scope and structure.

Non-medical welfare services for children, the indigent, the aged and the disabled are provided for by other Statutes which will be discussed in later chapters.

Social Security and National Insurance

The relief of poverty and destitution, the care of the less fortunate, the disabled and the aged, the treatment of the sick and ailing—in

greater or less degree, all these are accepted as community responsibilities by civilised peoples.

In some instances they are covered by State action financed out of general revenue or special levies; in other instances, by charitable institutions paid for out of private pockets. In most countries both methods are found side by side. Some provisions are made for defined groups within the community according to income, employment, or special needs; others are made for everybody who needs them and cares to use them. Some benefits take the form of cash payments to be spent more or less as the beneficiary wishes, and others are provided as services and aid in kind.

All these forms of community help are essential features of the social structure of Britain, and all of them have a long history. It would go beyond the present purpose to trace, even in outline, the growth of the various provisions and the amendments they have undergone over a long period of years; but it is useful for the purpose of providing a background against which recent legislation can be viewed to mention certain tendencies accompanying their coming to maturity. Clearly discernible are the following:

- (1) The assumption of responsibility by the State for services of proven worth which were developed in the first place by voluntary or charitable effort.
- (2) The extension of benefits, available at first to sections of the community only, to everyone in appropriate circumstances.
- (3) The unification of services, by which is meant the provision of a single service of a particular kind to meet some medical or social need of the community as a whole.

Thus, for example, instead of maintaining one medical service for the destitute and another for those who can afford to pay, a single service is provided for everyone irrespective of means or other distinction. The use of services so provided is regulated solely by medical or social need—a maternity service according to obstetric needs, a medical service according to medical needs, the care of the mentally subnormal and blind persons according to their disabilities rather than their social position or income level.

Post-war legislation, which had its origin in the Beveridge Report referred to earlier, (p. 40) has developed social security in Britain in all three directions to a point far in advance of any other country in the world, partly by consolidating pre-existing law and partly by new provisions. The Acts cited below are mainly responsible. They should be read together as facets of a single intention—the unification of actual provisions and their progressive enlargement to help everyone in need.

The National Insurance and National Insurance (Industrial Injuries) Acts, 1946.

The National Assistance Act, 1948.

The Ministry of Social Security Act, 1966.

The Family Allowances Act, 1945.

This section refers to the financial aids which are available under these Acts.

Until recently the earlier Acts were administered by the Ministry of Pensions and National Insurance and the National Assistance Board. The Ministry of Social Security Act, 1966, established a Ministry of Social Security which has overall responsibility for the administration of cash benefits. The Ministry of Pensions and National Insurance was abolished.

Within the new Ministry there is a Supplementary Benefits Commission responsible for determining awards of benefit, for advising on social problems and for promoting research into these problems. Thus, there is now one Ministry responsible for all social security cash benefits, contributory and non-contributory, with one Minister responsible for governing the administration of benefits. The Ministry has over 800 local offices throughout the country to help run the scheme. Local Advisory Committees (replacing pre-existing national insurance and national assistance local advisory committees) advise the Minister on questions referred to them.

It should be noted especially that Local Authority Welfare Services provided under Part III of the National Assistance Act are not affected by the new legislation. These services are referred to in Chapter V.

The basis of the main National Insurance Scheme is the provision of cash benefits in a variety of circumstances in return for regular weekly flat-rate contributions. For employed persons earning over £9 a week additional contributions are now payable, graduated according to earnings, and providing extra unemployment and sickness benefits and supplementary widows' allowances. They are called earnings-related supplements.

Employees covered by an adequate occupational pension scheme, *e.g.* superannuation schemes, can be contracted out of the graduated part of the scheme by their employers.

The Industrial Injuries Scheme provides cash benefits for those who are unable to work or are disabled as a result of an accident at work or a prescribed industrial disease. There are also benefits for widows and certain other dependants of industrial casualties. The benefits under the National Insurance (Industrial Injuries) Scheme are:

Injury benefit

Disablement benefit

Benefit for widows and orphans.

Excluding students and certain other groups for whom there are special rules, people are insurable in one of three classes from the time they leave school until they qualify for retirement pension. The three classes are:

Class I. —Employed persons (wage and salary earners).

Class II. —Self-employed Persons (in business on their own account).

Class III—Non-employed Persons (not in Class I or Class II).

Flat-rate contributions are paid weekly by sticking national insurance stamps onto a national insurance card. Employers stamp employees cards and deduct the employees part of the contribution from his pay. Self-employed and non-employed contributors stamp their own cards. Stamps are on sale at Post Offices. Graduated contributions are paid differently. They are sent by the employer with P.A.Y.E. income tax to the Collector of Taxes.

It would be inexpedient to set out here details of contributions and benefits under the scheme. For one thing, they comprise rather lengthy scales since the contribution due from an individual, now depends not only on his insurance class but also on his average weekly earnings and on whether he is contracted-out of the main graduated arrangements. Moreover, as both contributions and many benefits are also graduated according to earnings, and benefits are subject to frequent revisions, current rates are best obtained from official booklets and leaflets published from time to time by the Ministry.*

It will be sufficient for the present purpose to give examples of contribution rates in operation at the time of writing and to refer to the main benefits under the scheme.

CONTRIBUTIONS

The present† flat-rate contributions for Class I employed persons aged 18 and over are shown below:

TABLE 1
*Combined Contributions for persons 18 years
and over (not contracted out)*

	Paid by Employee	Paid by Employer	Total
Men	15s. 8d.	15s. 2d.	30s. 10d.
Women	13s. 2d.	13s. 2d.	26s. 4d.

For those under 18 years of age in Class I, the total contributions are 18s. for boys and 15s. for girls, and there are special low rates of contribution for retired persons and certain married women and widows.

In addition to flat-rate contributions, both men and women pay graduated contributions to meet the cost of the new earnings-related supplements. The contribution at present payable by the employee is four and three-quarter per cent on that part of the weekly pay lying between £9 and £18, plus half per cent on the part between £18 and £30. The employer makes a matching contribution.

There are separate and different contributions for contracted-out employed persons, self-employed persons and non-employed persons

* Everybody's guide to National Insurance. H.M.S.O., 1965, price 10d. Guide to the New Earnings-Related Short-Term Benefits Scheme. Ministry of Social Security, 1966.

† As from 30 October, 1967.

(for particulars, see the official publications cited in footnote, p. 55).

It should be noted that National Health Service contributions, are completely separate from national insurance contributions but for convenience they are collected with the national insurance contributions in one combined stamp.

THE BENEFITS

Class I contributors (Employed persons) enjoy the full range of benefits listed below. They also enjoy the benefits of the National Insurance (Industrial Injuries) Scheme.

Class I benefits

Unemployment benefit
Sickness benefit
Maternity grant
Widow's allowance
Widowed mother's allowance
Widow's pension
Guardian's allowance
Child's special allowance
Retirement pension
Death grant.

Class II contributors have the same entitlements excepting only Unemployment benefit. Class III contributors have no entitlement to Unemployment benefit, Sickness benefit and the Maternity allowance.

Unemployment benefit is usually paid at an Employment Exchange; sickness benefit, maternity grants and death grants by postal draft; and other benefits and allowances by a book of weekly orders which are cashed at a chosen Post Office.

SICKNESS AND UNEMPLOYMENT BENEFITS

The standard weekly rate for a man or women over 18 years of age (except a married woman) is 90s. plus 50s. for an adult dependent, 25s. for the eldest dependent child and 17s. for each other dependent child.

An earnings-related supplement is payable in addition at the rate of one third of the average weekly earnings lying between £9 and £30, subject to a maximum total benefit of 85 per cent of average weekly earnings. The maximum additional payment is £7 (one third of £21).

RETIREMENT PENSIONS

Broadly, to qualify for a retirement pension a man must reach the age of 65 and a woman the age of 60, retire from regular work and comply with certain contribution conditions. The amount payable cannot be stated simply because it may be made up of a flat-rate pension, increases for dependants, graduated pension and extra pension if work continues beyond the minimum retirement age. The standard weekly flat-rate for

persons who retire at the minimum pension age is £4 10s. for a single person and £7 6s. for a married couple.

WIDOW'S ALLOWANCE

This allowance is paid for 26 weeks and consists of a flat-rate weekly benefit of £6 7s. 0d. plus an earnings-related supplement which may be anything up to £7.

Maternity Benefits

MATERNITY GRANT. The mother is entitled to receive a Maternity Grant of £22 for each baby born. The grant may be paid on either her own insurance or her husband's, but not on both.

To qualify, either the mother or her husband must have paid 26 contributions and must have at least 26 contributions paid or credited in the previous contribution year.

MATERNITY ALLOWANCE. This Allowance is paid (in addition to Maternity Grant) to employed or self-employed women who give up their paid work for the period for which the Allowance is paid. The standard rate of benefit is £4 10s. a week normally payable from eleven weeks before the expected confinement, for a period of 18 weeks.

To qualify the mother must have paid Class I or Class II contributions for at least half of the previous 52 weeks. If less than 50 contributions have been credited, but at least 26 have been paid, the allowance is paid at a reduced rate.

DEATH GRANT

The standard rate of grant is £25 when an adult dies and a smaller sum when a child dies. It is paid on the death of an insured person or of the wife, husband or child of an insured person.

FAMILY ALLOWANCE

An allowance of 8s. a week is paid in respect of the second child, and 10s. a week for the third and subsequent children in a family including two or more children under the upper limit of compulsory school age.* The allowance is payable through a Post Office, as a rule to a wife or other woman of the household. In the case of a man maintaining his children and not having a wife or living apart from her the allowance is payable to the father.

Family allowances are not an insurance benefit and there are no contribution conditions. Claim forms are obtained from any local Social Security Office.

SUPPLEMENTARY PENSIONS AND ALLOWANCES

Besides bringing together in one new administration the pre-existing National Insurance, War Pensions and Family Allowance Schemes, the Ministry of Social Security Act, 1966, replaced the former national assistance by a new scheme of non-contributory benefits. The new

* Soon to be increased.

scheme provides a form of guaranteed income for those in need of such a benefit over a long period. An important aim of the new scheme was to replace certain aspects of national assistance which made a great number of elderly people reluctant to make claims for assistance although they were in undoubted need. Some 750,000 it appeared, had failed to apply for the assistance to which they were apparently entitled. The scheme differs from national assistance in several respects. Detailed enquiries into small special needs are dispensed with, assessment rules are simplified, awards are made as a rule for a year at a time, and pensioners receive both retirement pension and supplementary pension in one order book. Under the new scheme a claimant may either have a representative of the Ministry visit him at home or may send in a written return of his income by post and then have a confirmatory interview by appointment at the local office of the Ministry. By this means, pensioners need no longer be reluctant to make claims for fear that their neighbours and others would be aware of their circumstances. Active steps are being taken to encourage people to put in a claim and to ensure that both financial needs and needs for Welfare services are brought to the notice of the authorities who can provide for them. Claim forms are available in every Post Office.

THE NEW BENEFITS

The guaranteed income under the scheme is £4 10s. 0d. a week for an old person living alone as a householder after he has paid his rent and rates; for an elderly married couple, after they have paid their rent and rates, £7 2s. 0d. The amount of supplementary pension entitlement is the sum needed to bring his assessed resources up to the guaranteed income level. In assessing resources the value of an owner-occupied house, savings not exceeding £300 and the first 40s. a week of part-time earnings are totally disregarded. There are other disregards which need not be given here.

The benefits for those under pension age but aged 16 or over, with certain exclusions, is called a supplementary allowance. There are different levels of guaranteed income, or "income requirements" for single householders, other single persons, married couples and children; and separate higher rates for the blind.

A special addition of 9s. is made to the normal requirements figure for elderly people living at home and for certain people below pension age when they have been in receipt of a supplementary allowance for two years (long-term cases). The income requirements for a single householder claiming a supplementary allowance, and not being a long-term case, is £4 1s. 0d.; for a married couple, £6 13s. 0d.

The Commission has power to help most heavy expenses caused by serious illness or disability, or to award lump sums to meet exceptional requirements. Charges made under the National Health Service for dentures, glasses, etc., may also be met.

The unified social security scheme now in operation is designed to ensure that no-one need fall below the poverty line from lack of income due to sickness, disablement, unemployment and old age.

CHAPTER IV

THE HEALTH DEPARTMENTS OF LOCAL AUTHORITIES AND THE SCHOOL HEALTH SERVICE

The major Local Authorities derive their powers to provide medical services mainly from the National Health Service Act, 1946 and the Education Act, 1944. They appoint Health and Education committees to undertake duties under the Acts and have Health and Education departments for their local administration. The Medical Officer of Health is the chief officer of the Health Department, and the Director of Education, of the Education Department. Often the offices of M.O.H. and S.M.O. are combined, *i.e.* the M.O.H. in addition to his duties as M.O.H. acts as school medical officer to the Education Department.

In this chapter it is proposed first to discuss the Health Department, and then to outline the work of the School Health Service.

THE HEALTH DEPARTMENT

The County Councils, County Borough Councils, London Borough Councils and County District Councils each maintain a health department (or public health department). The departments vary in size and structure as much as the parent Authorities and no single description fits them all. There are, as we have seen, two classes of health departments, *i.e.* those of County Councils and County Borough Councils (major authorities) and those of County District Councils (minor authorities).

Generally, the minor authorities are responsible only for sanitary services, the compilation of certain local statistics, for some aspects of health education and the control of infectious diseases. Some have, in addition, responsibility for personal health services under the Local Government Act, 1958 (see p. 36). Excepting their sanitary sections, staffed by public health inspectors, the personnel of most of them is limited to one or more clerks and a Medical Officer of Health. In the smaller areas, the M.O.H. is not a whole-time officer of the minor authority. He is often either M.O.H. to a combination of district councils and/or an assistant medical officer of the county council.

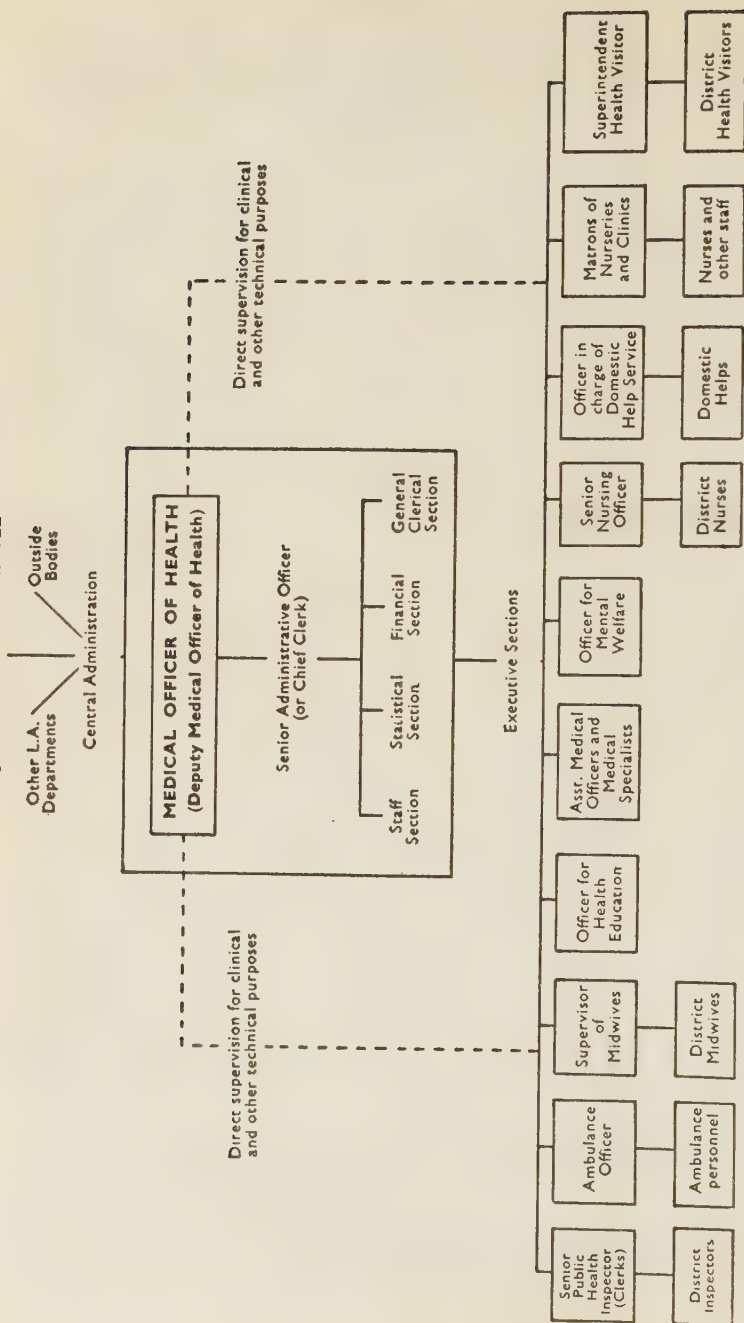
The County and County Borough health departments, though they differ greatly from one to another, usually have an administrative nucleus of varying size and a number of executive sections for discharging duties under the Public Health Acts and the National Health Service Act, 1946. (See diagram on p. 60.)

The bigger departments employ a number of whole-time and part-time assistant medical officers for ante-natal clinics, infant welfare, immunisation programmes, the ascertainment of mental and physical defectives, etc., and in connection with the School Health Service.

They also employ specialists in many fields and increasingly use general practitioners on a sessional basis.

The qualifications of some assistant medical officers are prescribed by

Fig. 4. HEALTH COMMITTEE



ADMINISTRATIVE STRUCTURE OF THE HEALTH DEPARTMENT OF A MAJOR AUTHORITY.

Regulations; a medical officer in charge of an ante-natal clinic, for instance, must be a practitioner of not less than three years' standing with special experience of practical midwifery and ante-natal work.

The main function of the administrative staff is to arrange, facilitate and supervise the work of the executive sections, to co-ordinate their duties and to keep their personnel properly informed. It is also responsible for relating the work of the health department as a whole to that of other departments of the Local Authority, for relating its work to decisions of the Authority, and for maintaining relations with other bodies such as Local Management Committees, Executive Councils and Voluntary Agencies.

It would go beyond the present purpose to discuss office organisation, but it is useful to refer to the functions of the chief clerk or administrative officer on whom the routine of central administration largely depends. This officer is the main channel of communication between the Medical Officer of Health and officers in charge of sections of the central staff. He relieves the Medical Officer of Health of a great deal of administrative work. He supervises the details of clerical work incidental to the conduct of committee business, personnel management and departmental finance. It is he who also superintends the routine office work of the department.

In the smaller departments he often combines with other duties the maintenance of staff records; in the larger departments another senior officer may be engaged wholly on this work. Whatever the arrangements, the maintenance of orderly staff records, embodying particulars of salary grades, holiday leave and sick leave, and reports about standards of work of members of the staff, is essential for good personnel management and smooth departmental relations.

No less important in the central administration is the statistical section. Without accurate information compiled over a period of years and available in the right form when it is wanted, the M.O.H. can neither report speedily on matters of policy nor plan new developments. A good statistical section enables him to do these things as well as furnishing the material required for official returns and reports.

It will be recalled that the services provided by the Local Health Authority under Part III of the National Health Service Act, 1946, are:

- Health visiting.
- Infant welfare and the care of mothers.
- Day nurseries.
- Home nursing.
- Home midwifery.
- Domestic Help.
- Vaccination and immunisation.
- Care and after-care services.
- Mental welfare.
- Ambulance services.
- Health centres.

Health centres have already been discussed (p. 47), and health visiting and midwifery services are the subjects of later chapters. Ambulance services do not call for more than a mention in a book of this kind, for although they are vital to the operation of medical services they are almost entirely non-medical in their administration and their purpose is self-evident.

The rest of these services and health education will be discussed in turn.

Child Welfare Clinics

A great deal of the routine supervision of the health of infants and children under the age of five years is done at Child Welfare Clinics or by Health Visitors in the course of home visits. In 1965, 342,557 child welfare sessions were attended by almost two million children, of whom approximately two thirds were under the age of two years. An increasing number of sessions are held at purpose-built premises where ante-natal and school health clinics are also held. Typically, the Child Welfare Clinic is staffed by a medical officer and one or more health visitors who are often assisted by voluntary workers. In 1961, 117 medical officers were employed full-time by local health authorities in maternal and child welfare duties and another 1,159 combined maternal and child welfare duties with school health and other local health authority work. An increasing volume of child care is undertaken by doctors employed on a sessional basis. In 1961 the number so employed was over 1,200, of whom two thirds were general practitioners. In some areas general practitioners hold child welfare sessions for children on their lists, either in local authority premises or in their own surgeries with a health visitor in attendance. This relatively recent development is evidence of the increasing association of the general practitioner with child welfare work and the closer association of health visiting with general practitioner services.

The work of child welfare clinics has changed greatly in scope and emphasis since their establishment half a century ago. To the earlier concern of the child welfare service with infant feeding, nutritional surveillance, the distribution of liquid and dried milk and vitamins, and the early identification of defects and ailments, there have been added latterly a more comprehensive developmental surveillance, the identification and assessment of "high-risk" groups and carrying out of immunisation programmes. Health education, directed especially to infant and child care, has been an important activity of child welfare clinics from their early days. The contribution which this aspect of clinic work has made directly and indirectly to improved standards of child care, though difficult to measure, is undoubtedly considerable. Like other long-standing functions of the child welfare clinic, it is still an activity of prime importance whose value has been enhanced in recent years by a linkage with social guidance which aims at preventing as far as possible the more serious disorders of childhood and the consequences of unremedied handicaps.

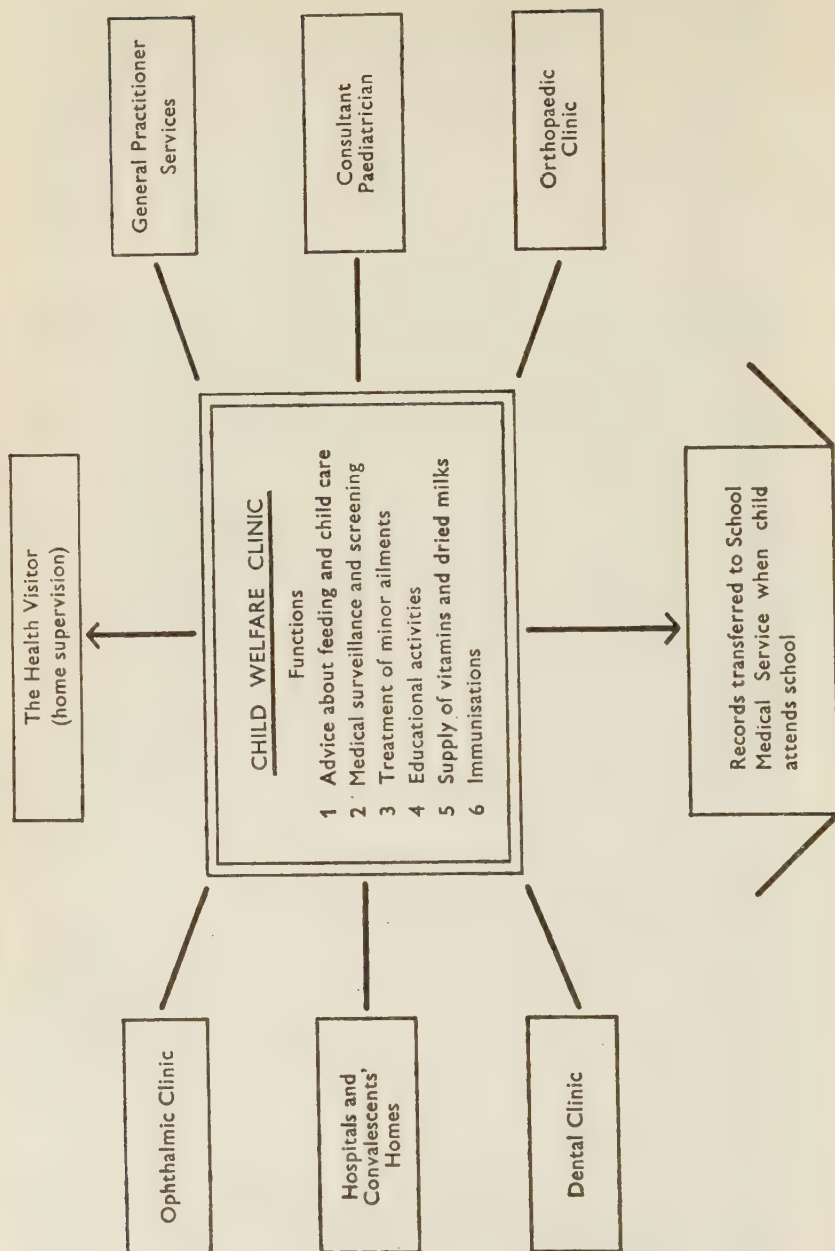
The virtual eradication of many serious diseases which were common a generation ago and the saving of the lives of thousands of children who would once have died have transformed the problems of child health. It has been estimated that some 500,000 children in Britain are physically or mentally handicapped. This group of children present long-term or permanent problems since by no means all handicapping conditions are at present remediable. It is, however, well established that early recognition, remedial care and advice, and help in bringing up the handicapped child offer the best prospect of lightening the burden of handicap on the child and the family. The early recognition of defects—in particular mental subnormality and sensory defects—and the provision of guidance and advice by health visitors and others are services the welfare clinic is eminently fitted to render. Medical and other remedial care (other than for minor ailments) is obtained by referring the child to the family doctor or to the hospital and specialist services of the National Health Service either through, or with the concurrence of the family doctor. The diagram on p. 64 shows the main activities of the Child Welfare Clinic and the channels of referral and specialist services associated with it.

A recent development in the medical screening of infants and young children merits special mention. Since the issue of a paper from the Office of the Ministry of Health in 1963 on Infants at Risk of Handicapping conditions, it has become the practice of local health authorities to keep a register of handicapped children and children considered specially “at risk” of handicapping conditions. The register is called alternatively an “observation”, or “at risk” register. Children on the register are assessed and followed up either at the clinic or at home by the Clinic Medical Officer and the Health Visitor, or in some instances, by the general practitioner or a paediatrician. The arrangements made for maintaining and supervising the register vary from area to area. In some areas a central register is supervised by a Senior Medical Officer or a Superintendent Health Visitor, whilst in other areas registers are kept in the local authority clinics. To be effective, a register has to be kept up-to-date or “live”, and should clearly be regarded as a basis for action and not merely as an office record.

Ideally, screening tests for conditions which are not obvious should be carried out on every child, but this is at present considered to be impracticable. By restricting assessment to a selected group of children, much time and unproductive labour are saved. The procedure is sufficient in as much as the selected group includes all the children needing more thorough investigations (*i.e.* if the test is sensitive enough). It is economical in as much as it does not include too large a proportion of children who prove to be normal when a more thorough investigation is done.

The precise criteria for admitting children to the observation register are decided locally and vary in detail from area to area. In general, the family history, the mother's condition in pregnancy and labour, the child's pre-natal, intra-natal and post-natal experiences, and any indication of special difficulty in rearing the child or any departure from

Fig. 5. ELEMENTS OF THE CHILD WELFARE SERVICE



normal development are taken into account. In one area (Reading) to cite a specific example, the observation register is based on 12 categories:

1. A family history of deafness or dumbness.
2. Virus infection of the mother before the sixteenth week of pregnancy.
3. Threatened abortion or ante-partum haemorrhage.
4. Exchange transfusion or a serum bilirubin over 20 per cent.
5. Hydramnios.
6. Evidence of foetal distress, post-partum distress or anoxia, including delay in the establishment of respiration of over three minutes from whatever cause.
7. All second twins.
8. Prematurity, if the birth weight is less than 3 lbs. 12 ozs.
9. Malformation if needing treatment or likely to give rise to handicap.
10. Cyanotic attacks.
11. Significant feeding difficulties.
12. Any other cogent reason (for instance, maternal age over 40).

The criteria for inclusion in a register will doubtless be refined for sensitivity and exclusiveness as further experience is gained. In the meantime, in addition to its direct usefulness, the procedures of selection and follow-up serve to develop a better informed interest in screening techniques and surveillance.

Vaccination and Immunisation

Immunisation against diphtheria, whooping cough, tetanus, poliomyelitis and tuberculosis, and vaccination against small-pox are provided under the National Health Service as part of a national immunisation programme. There is no compulsion to have any of them, and they are all given free of charge. Vaccination against measles is not provided as part of the general programme, but vaccines against this disease are offered to doctors who wish to use them. All the immunisations mentioned are carried out during childhood, mainly during the first two years of life. The various immunisations needed are undertaken in accordance with a time-table or calendar of immunising procedures in which they are suitably spaced. The individual procedures and calendars usually followed are referred to later (Ch. IX). Here we shall refer only to organisational aspects of the service.

The National Health Service Act requires the major local authorities in collaboration with county district health departments to make arrangements for children to be immunised. Immunisations under the scheme are done either by local authority staff or by the family practitioner as the parent chooses. A great deal of immunisation is in fact done in local authority clinic welfare centres, often at sessions held exclusively

for the purpose. Later immunisations are done in schools or at school clinics. Some local authorities use mobile vans for immunisation sessions to supplement provisions in fixed premises. A record of the immunisations a child has had is kept by the local health department and sent on to the appropriate M.O.H. when the family move into another local authority area. Family doctors are paid a fee for reporting the immunisations they have done to the local health department. With this information, their own records and records transmitted from other health departments, the health department is able to maintain a complete immunisation record for each child living in the area.

THE HOME NURSING SERVICE

Section 25 of the National Health Service Act places on the Local Health Authority the duty to make provision in their area for securing the attendance of nurses on persons who require nursing in their own homes. They may do so either by making arrangements with voluntary organisations who employ nurses or by themselves employing nurses.

The primary function of the service is sick nursing, but it should be noted that it also serves two other purposes:

- (1) to support home medical supervision and economise the time of the family doctor,
- (2) to spare hospital beds by enabling more cases to be cared for at home and by making early discharge from hospital more often a practice of choice. The home nursing service, in other words, should be regarded as a handmaid of the family doctor and hospital services, and should be made as useful as possible to both.

Ordinarily a nurse is summoned by the family doctor and works under his direction. The service is provided free, and arrangements are also made for lending sick room equipment free of charge. This is done either from stores under the direct control of the Authority or through a voluntary organisation such as the St. John Ambulance Brigade. In many homes where financial resources are limited the free loan of equipment adds to the effectiveness of the nursing service.

Both whole-time and part-time nurses are employed in the service. They usually work under the immediate supervision of a senior nursing officer. In most areas some of the nurses employed are Queen's nurses, and in rural areas especially, sick nursing and home midwifery are often done by the same nurse (district nurse/midwife or village nurse/midwife).

There is not sufficient information about sickness in the home to estimate what demands are ultimately likely to be made on a home nursing service which is freely available according to need. One nurse for every 7,000 of the population in an urban area is probably a fair figure at the present time. The limiting factor for some time to come will probably be the number of nurses available.

HOME HELP SERVICE

Section 29 empowers a Local Health Authority to provide domestic help for households with ill persons, lying-in women, old people or children of school age. They may do so either by themselves employing whole-time or part-time women or by arranging with a voluntary organisation such as the Women's Voluntary Service to run the service on an agency basis.

Most authorities now provide a direct service and some offer, in addition to daily home helps, a night sitter-up service. The selection of suitable women to act as home helps depends on individual circumstances. So far as the home help herself is concerned, many women are only able to serve in a part-time capacity, and their allocation to a particular household requires an intimate knowledge both of the home help and the household. The voluntary organisation is often in a better position than the health department to supervise the arrangements in detail by a generous use of voluntary supervisors and visitors. They are also in a good position to allocate a limited number of home helps according to varying demands and in accordance with agreed priorities.

The domestic help service is not provided free of charge. As a rule those who use it pay the full cost. In the case of households of slender means, reduced charges are made. Home helps are usually paid a weekly wage, based on an hourly rate.

It is not difficult for anyone familiar with conditions in general practice to visualise that the home nursing service, the sick nursing equipment loan service and the domestic help service are all needed by many less well-to-do households. Many chronically ill persons, for instance, cannot have effective medical care at home without home nursing. And when a housewife falls sick she often requires not only medical and nursing care but also domestic help to relieve her of household duties. The general aim is to provide home nursing and domestic help, and in appropriate cases to loan equipment, on a scale sufficient to ensure that medical care in the home is fully supported.

NURSERIES

Two distinct provisions are made by local authorities for the care of normal healthy children outside the home:

- (1) Nurseries—day or residential.
- (2) Nursery schools or classes.

THE NURSERY is mainly a continuation of a war-time measure to enable mothers of young children to go out to work. It now serves a wider social need by receiving children, for short or long periods when the mother is ill or pregnant or when there are special family problems of a social or economic kind.

Children are received in nurseries up to five years of age. In many, a high proportion of the children received are under two years of age, and sometimes young babies are admitted.

As the nursery often cares for the young children of mothers who have to go out to work, a day nursery is kept open for some ten hours a

day. As a rule, children are left there from 7.30 onwards in the morning, remain there for dinner and tea, and are collected again by the mothers between half-past four and half-past six in the afternoon.

Most Authorities allocate places in their nurseries by selecting according to urgency of need, giving high priority to unmarried mothers, widows, women with incapacitated husbands, and families with low incomes. Children are also admitted to nurseries during periods of domestic stress such as maternal illness, confinement and family bereavement. The parent makes a payment depending on the financial circumstances of the family.

Some Authorities maintain residential nurseries where children live entirely for a matter of weeks or months. This provision is especially useful in cases of maternal illness requiring hospital treatment, or a mother's admission to a maternity institution for confinement.

Both residential and day nurseries are valuable as a means of training a young child in sound habits of living, but they are not without risk. The nursery child is more likely to suffer from infections than the child cared for at home. The risk in a good residential nursery is less than in the day nursery,* where the child population often fluctuates and infections are introduced from day to day.

THE NURSERY SCHOOL OR CLASS is a part of the system of public education provided by Local Education Authorities. Children are received from 3 to 5 years of age, usually from 9 a.m. to 3.30 p.m. during school terms. A midday meal is provided. The number of places at present available in nursery schools and classes is not sufficient to meet the demand, but it is intended ultimately to expand this provision so that any parent who wishes to use it can do so. For the child whose mother does not go out to work, the nursery school is preferred by most authorities to the day nursery as a means of providing child companionship and early training for the older child.

NURSERIES AND CHILD MINDERS' REGULATION ACT, 1948

Under this Act the Health Department must keep a register of all premises other than private dwellings, where children are looked after for the day or a substantial part of the day or for a period of up to but not more than six days. If the children are moved to new premises, these must be registered.

Any person who receives for reward more than two children under five years old from more than one household must register with the Local Health Department.

Failure to register premises used as a nursery, or to register persons receiving children for "Daily Minding", is an offence and liable to a fine or if persisted in—imprisonment.

The Health Department may refuse to register premises for the purpose of receiving children if they are unsuitable or unsafe or if any person who will look after the children there is unsuitable.

They may refuse to register a person for daily minding if the minder

* This is not true of the residential nursery receiving large numbers of young babies. The risk of infection is great for the baby.

or any person employed by them is not a fit person to care for children.

If the Health Department register premises they should specify the number of children to be received for payment and also limit the number of other children in the house. They may require repairs or alterations to be made to the premises and insist on adequate precautions against fire and exposure to infection. Any case of infection occurring in a day nursery must be notified to the Medical Officer of Health.

The registering authority are entitled to prescribe that the person in charge of a nursery must have certain qualifications and the nursery must be adequately staffed and equipped to deal with the number of children permitted by their registration. The children must have an adequate diet. The Health Department may also arrange that records are kept of children attending nurseries, and that the children should be under medical supervision.

A person authorised by the Local Authority—a Medical Officer, health visitor or health inspector may at all reasonable times enter and inspect premises used as nurseries or the houses of daily minders, the children being minded and the arrangements for their welfare.

If an authorised officer of the Local Authority is refused entry and has reasonable cause to believe that children are being minded in premises not registered with them or not meeting the requirements of registration the officer may apply to a Justice of the Peace for a warrant to enter and inspect.

Care in the Community

No one who has followed the course of events during the last fifty years could fail to be aware of the changes in attitude towards hospitalisation which have occurred during the period. The great improvements in the standard of hospital care which were made in the twenties and thirties did much to dispel an earlier reluctance of many people to go into hospital for treatment. It was indeed replaced for a time by an almost unqualified acceptance of the hospital as the best place for a wide range of medical care at all ages. The pendulum swung too far. Admission to a hospital is, of course, the only effective way of investigating and treating conditions which require equipment and teams of specialists which cannot, as a rule, be provided elsewhere. This fact is not in question. It has, however, become increasingly clear that hospitalisation has certain medical, social and economic disadvantages compared with care in the home for conditions which can be adequately treated and managed there.

Young children, the mentally disordered and the elderly, especially, deteriorate in the circumstances of social isolation and dependence of the institution. The child becomes insecure, withdrawn and without purpose; the long-stay old person finds it difficult to re-establish an independent way of life after discharge; the mental patient in hospital is deprived of the family and community contacts he needs for restoration to full health.

The last decade has witnessed a more discriminating selection of patients for admission to hospital and the earlier discharge of patients

from hospital when this is feasible. How far the new practice is attributable to therapeutic advances and a recognition of the medical superiority of early ambulation and how far it is due to a recognition of the adverse effects of prolonged hospitalisation and the greater practicality of home care and ambulatory methods of treatment is hard to say. All three factors have doubtless re-enforced each other.

Whatever the reasons for the changes, it is clear that the new attitude towards institutional care has dictated an enlargement of care in the community with corresponding adjustments to the organisation of non-institutional medical-care and social services.

It is also obvious that the length of time which many patients require to spend in hospital depends not only on medical considerations but also on the kind of care and supervision they will have at home after leaving the institution. For example, the outlook in peptic ulcer, diabetes, tuberculosis and mental disorder, depends in no small measure on the quality of supervision and support which the patient gets at home after discharge from hospital.

Particularly, the risk of breakdown after in-patient treatment, and a consequential re-admission to hospital, depend in large measure on the quality of home care available. Or referring to a somewhat different aspect of incapacity, the attainment of relative independence by a disabled person or a patient restored after sickness or injury to something less than full capacity is dependent largely on securing for him a suitable or protected occupation.

These considerations and the needs of large numbers of aged and handicapped persons are among the facts responsible for the concept of care in the community and the development of community care services.

The task of developing community care falls largely on Local Health and Welfare Authorities, working closely with the general practitioner service, industry and voluntary organisations. The services provided are of two kinds; services given by health visitors and other social workers, home nurses, home helps and midwives to help people in their own homes; and specialised accommodation to meet needs which cannot be met in the home. Under the latter heading are provisions such as old people's homes, hostels for the mentally ill, training centres for the sub-normal and clinics for mothers and children. Services for the care of the mentally disordered are referred to later in this chapter and services for the care of the elderly and handicapped in Chapter V.

It will be clear that care in the community is not provided by departments designated exclusively for this purpose. In some instances, specialised workers (*e.g.* psychiatric social workers) are used, but as a rule community care is given by health and welfare personnel with duties of a general character and by a range of voluntary agencies.

The general practitioner has an important part in the care of the sick, the aged, and the handicapped, but there is much he cannot do for his patients without the aid of supporting services. Organised resources and specialised personnel are usually necessary. The family doctor—or for that matter, the hospital specialist—may see the need for a tuberculous family to be re-housed, for the diabetic or peptic subject to

have instruction in domestic cookery, for the mental patient to have social activities and occupational therapy, for the elderly person to have home nursing and domestic assistance. Such needs may be apparent, but their fulfilment is usually beyond the resources of the family doctor and in many respects outside the strict province of medical therapeutics.

The services we are considering provide the wide range of non-medical assistance which is commonly needed.

The National Health Service Act, 1946, envisaged the development of community services for the support of medical care services under the heading "care and after-care". To this end, Section 28 of the Act authorised Local Health Authorities and if so directed by the Minister, required Local Health Authorities to

"make arrangements for the purpose of the prevention of illness, the care of persons suffering from illness or mental defectiveness, or the after-care of such persons . . .".

The Minister has directed Local Health Authorities to make specific proposals in relation to tuberculosis and mental disorder, and latterly to prepare comprehensive plans for the development of health and welfare services over a ten-year period.

So far as the individual is concerned, care and after-care services and welfare services are often one and the same. They are, however, in some degree administratively separate and their aims are different. Care and after-care services are intended to support medical services, with the object of securing as complete a recovery as possible in a medical, social and industrial sense. The Welfare services of local authorities, by contrast, are designed to help aged and handicapped persons with little or no prospect of medical improvement. The one aim is dynamic in concept, the other static; and it is with the dynamic that care and after-care services are mainly concerned.

The para-medical tuberculosis services afford an example of the range of community care needed by tuberculous patients and their families. They include:

- (1) assistance to obtain suitable housing accommodation;
- (2) arrangements for the boarding out of children of infectious parents;
- (3) the provision of workshops, settlements, hostels and night sanatoria;
- (4) the supply of nursing requisites, extra nourishment, clothing, beds and bedding, etc., to tuberculous patients; and
- (5) helping patients to make effective use of services provided by other agencies, *e.g.* co-operation with the Disablement Rehabilitation Officer, industrialists and voluntary bodies.

In addition to the overriding supervision given by the family doctor, from a medical point of view one or more of these services are often required as an aspect of treatment whilst the patient is awaiting admission to hospital or sanatorium or as a continuation of treatment

he has had as an in-patient. From a social point of view they provide for social rehabilitation and attention to the family consequences of sickness, and from an industrial point of view for resettlement in suitable employment.

Reference has already been made to the need for hospital authorities and Local Executive Councils to work closely with local authorities for the purposes of planning and operating community care. This is especially important in the fields of mental disorder, geriatrics and maternity.

Part III Services as a Whole

It may appear that the local health services we have discussed are a miscellany of duties over-spilling from the main stream of medical care provisions. If the broad concept of community care is borne in mind, however, it is clear that this is not so.

Broadly speaking, Part III of the National Health Service Act makes the local health authority responsible for the care of people in their homes by supplementing the care provided by general practitioners and hospitals. Thus, the ambulance services convey people to and from hospitals and clinics; home nursing and domestic help support, and to some extent spare, general practitioner and hospital services; and Section 28 enables the Local Authority to provide for continuity of care between hospital and home and to give non-medical support to general practitioner care.

Mental Health Services and the Mental Health Act, 1959

Current attitudes towards mental disorder and the refashioning of mental health services in recent years afford as good an example as can be found of the application of the concept of care in the community to one of the biggest health problems of the day.

Four out of ten hospital beds in England and Wales are allocated to patients with mental disorders. In 1965, there were some 171,000 admissions to hospital or psychiatric patients including some 89,000 first admissions. At the end of 1964, the number of persons receiving some form of assistance from local authority mental health services exceeded 161,000, and it is estimated that about one person in ten will need psychiatric care at one time or another during his life.

THE MENTAL HEALTH ACT, 1959

For more than a hundred years, the care of the mentally disordered has been progressively emancipated from the mediaeval concept of custodial care by successive Acts of Parliament. The Mental Health Act, 1959, finally swept away the impediments of earlier legislation by paving the way for the repeal of the Lunacy and Mental Treatment Acts, 1890–1930, and the Mental Deficiency Acts, 1913–38.

The modern view of mental illness and subnormality was expressed clearly in the Report of the Royal Commission on the Law Relating to Mental Illness and Mental Deficiency (1957), namely, that these con-

ditions are not fundamentally different from physical illness, injury or malformation in any respect which matters in the provision of remedial services.

The Mental Health Act made radical changes along lines recommended in the Royal Commission's Report by providing for the care of the mentally ill and subnormal within the general health and welfare services. Broadly, the aims of the Act were to establish a single legislative code for dealing with the mentally ill and mentally subnormal; to bring planning and provision for these patients, as far as possible, into the general stream of health and welfare services, while preserving adequate individual and community safeguards; and to reorientate the service from institutional towards community care.

The main changes made by the Act are:

- (1) The single term "mental disorder" was introduced to embrace all forms of mental illness or disability. (For definitions of categories of subnormality see p. 193.)
- (2) The statutory limitation on the reception of mentally disordered persons in designated hospitals was brought to an end. Treatment for any type of patient may be provided in any type of hospital. New safeguards were proposed for the few cases where compulsory admission and detention are needed.
- (3) New safeguards were introduced against improper compulsory detention. Mental Health Review Tribunals consisting of legal, medical and lay members, were set up for this purpose.
- (4) The board of Control was wound up and its remaining functions transferred to the new Review Tribunals, the Ministry of Health and local authorities.

The powers of compulsion and the related statutory procedures are carefully defined. Compulsory admission may be either for observation up to 28 days, or for treatment, no order being valid initially for more than two years. Compulsory detention in hospital is not authorised for all cases of mental disorder. For instance, a "sub-normal" patient cannot, generally speaking, be compulsorily admitted if he is over 21 years of age or compulsorily detained after he is 25 years of age. Special considerations apply to persons convicted of a criminal offence. Under specified conditions, any mentally disordered person so convicted may be admitted to, and detained in hospital by court order. Safeguards against unnecessary detention include:

- (1) The requirements that applications for admission shall be founded on two independent medical certificates.
- (2) The responsible medical officer, the Hospital Management Committee, and the nearest relative, have powers of discharge.
- (3) Although the responsible medical officer may over-rule the relatives wishes, the relatives then have a right of appeal to a Mental Health Review Tribunal.

Compulsory powers and special procedures also apply to the reception of patients into guardianship whether of a private individual or a

local health authority. Grounds for an application are similar to those for compulsory admission to a hospital.

Distinctive Features of the Present-day Service

Much of the extensive remodelling of the mental health service can be referred to two principles—namely, that the mentally disordered person should whenever possible be cared for in the community—preferably remaining in his own home; and secondly, if admission to hospital is unavoidable then the hospital routine should be as normal as possible, in-patient stay as short as possible, and contact with the outside world should be maintained as far as possible.

The implementation of these principles is seen in the services now provided. Among their main features are:

- (1) The encouragement of home treatment with hospital supervision wherever practicable, *i.e.* a shift of emphasis from care in hospital to care in the community. A special aspect of this development is the “day hospital”, which patients attend for active treatment during the day, while continuing to live at home.
- (2) More extensive provision for care and after-care by local authorities, and such preventive measures as are possible in the present state of our knowledge.
- (3) The encouragement of activities varying from occupational therapy, pure and simple, to paid industrial or other work. In some cases the latter may be at an ordinary factory, or other work place, the patient returning to the hospital ward at night.
- (4) The treatment of mental illness in general hospitals. For this purpose, the appointment of consultant psychiatrists, and the establishment of acute units and out-patient clinics.
- (5) The encouragement of voluntary hospital admission and treatment; and reduction of custodial requirements to the relatively small residual categories where compulsion is necessary either in the interest of the patient or society.
- (6) Greater freedom of movement of patients both in hospital and outside and particularly the abolition of the old regime of locked doors and padded cells.
- (7) The provision of smaller active treatment units, and the use of large mental hospitals mainly for the chronic patient.

Community services administered by local authorities include advice and support by mental welfare officers, psychiatric social workers and health visitors; social contacts in the form of day centres, clubs, etc.; employment for the mentally subnormal, both children and adults in training centres; and residential accommodation for those unable to live at home, including elderly persons whose mental infirmity is not too great to make them unacceptable in old persons' homes.

Residential accommodation in hostels for short terms and for long periods is regarded as an integral part of the mental health service.

Alternative forms of residential accommodation such as lodgings in private households and the placement of small groups in rented houses are increasingly used.

Mental health is one of the fields in which the tripartite peripheral structure of the National Health Service is placed under special stress, (other examples are tuberculosis, midwifery and geriatrics). Methods of achieving a unity of purpose and operation include joint planning committees, joint consultant appointments by Hospital Boards and Local Health Authorities, secondment of staff from one authority to another; and close collaboration at the professional level.

The development and refashioning of the Mental Health Services since 1960 has been undertaken with expedition. Local authorities have made great progress in providing hostels and residential accommodation and they employ qualified social workers in their mental health services in increasing numbers. The number of hostels and training centres for the mentally subnormal has also increased substantially.

On the hospital side, the number of beds needed for the mentally ill is steadily decreasing. The bed use of the mental hospital population fell from 3.4 per 1,000 of the population in 1954 to 2.8 per 1,000 in 1963. There have been considerable developments for treating out-patients, day-patients and short-stay cases in acute units in general hospitals. For medium-stay cases (*i.e.* up to two years) provision is usually needed in institutions other than general hospitals. Accommodation for long-stay cases may to some extent be linked with provision for the chronic sick in general, but for the present, existing mental hospitals have been adapted for this group of patients.

There has been an increase in short-stay patients and a marked decrease in long-stay patients. It is estimated that by 1980 there will be very few patients staying in mental hospitals for over two years; and more than 90 per cent of all in-patients are now "informal" patients compared with 31 per cent shortly after effect was given to the Mental Health Act, 1959. Many beds are still occupied by psycho-geriatric patients.

On the other hand, there has been an increase of severely subnormal and older patients because the severely subnormal now tend to survive infancy and live longer. Fewer patients in the younger age groups reflect the policy of keeping stable and able-bodied subnormals in the community.

HEALTH EDUCATION

As we have seen, both the prevention of disease and the maintenance of full health depend in a large measure on the way people live and the way they make use of material resources and medical services.

Women still lose their lives because they do not know how to make proper use of existing maternity services; babies still die because their mothers are ill-informed about infant care; children still suffer a good deal of needless ill-health and incapacity because of ignorance of the principles of hygiene and healthy living. Poor nutrition is often

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directly attributable to bad household budgeting and indifferent cooking.

Lack of knowledge is not, of course, the only cause of unhygienic habits and neglect to make proper use of social and medical services. Mental subnormality and the fecklessness and maladjustment which create slatternly housewives and neglected homes and children account for a proportion of the failures. Conditions such as these cannot as a rule be corrected by education as ordinarily understood. But for most people the provision of better information about health and hygiene is an effective way of influencing them. Ignorance is still one of the "giants astride the path of progress".

The main purpose of health education is twofold; to teach the principles of hygiene and healthy living, and to inform people about specific matters in relation to their health, or about the medical and social services provided for their benefit.

Typical examples are advice about immunisation and vaccination procedures, about the right kind of attitude towards cancer, mental disorder and handicapping conditions, and instruction which helps a person to decide when medical advice should be sought.

The main deliberate methods in common use are:

- (1) Broadcasting, by radio and television: *e.g.* by doctors and others on special or general health topics.
- (2) Newspaper publicity, *e.g.* articles about local services, reports about conferences, national announcements.
- (3) Posters, *e.g.* the "coughs and sneezes" cartoon, diphtheria immunisation.
- (4) Leaflets, *e.g.* simple printed instructions suitable for issue in clinics about infant feeding, ante-natal hygiene and diet, etc.
- (5) The cinema, *e.g.* scabies, venereal diseases and blood transfusion films.
- (6) Lectures, demonstrations and film strips:
 - (a) To selected groups, *e.g.* schools for mothers, demonstrations in infant welfare centres.
 - (b) To captive audiences, *e.g.* youth movements, women's guilds and other adult organisations.
 - (c) Popular lectures and conferences.

Informal teaching by midwives, health visitors and other health officers should be a conscious part of their daily duty. They are able to influence many people by their demeanour, their example and their practical advice in matters on which their guidance is sought as they perform their daily tasks. There is little doubt that the cumulative effect of such informal teaching is more important in the long run in adult education than organised class instruction.

Formal teaching is most profitable during the years when it is an accepted feature of daily life. The introduction of health subjects against a background of human biology into the curriculum of primary and secondary schools can have far-reaching effects. A significant

development in recent years has been the recognition of the need for such teaching in schools, training colleges, and universities.

What to teach, whom to teach, when to teach and how to teach, are questions which confront the educationalist.

The following quotation* is an excellent summary of informed opinion on an important aspect of the subject.

"Education in healthy living must include sex education. Health education begins in the good home or nursery school with the inculcation of good habits. The child's questions about the functions of the body, including reproduction, should be answered simply and truthfully, and, before the age of puberty, the child should have acquired a knowledge of anatomy and physiology, including reproduction. It is important that such knowledge should be gained as part of general health education before sex has much emotional association. On this factual foundation, the adolescent learns the code of conduct which should govern the relationship between the sexes, how the sexual function is used for his or her own good, and that of the community, and to appreciate the higher moral aspects of sex which are so important in the preservation of family life. A sound knowledge of the laws of health must be an essential part of the equipment for parenthood for both sexes. Special instruction in more detailed aspects of sex physiology will be necessary before marriage.

"It must be stressed that the problem of training for parenthood should be dealt with fully for both sexes. Mothercraft teaching in schools and the training in nurseries and nursery schools for girls is excellent, but care must be taken to see that too narrow a viewpoint is not given to the young woman, and such education should be directed to inculcating general principles and attitudes rather than details of methods of cooking and infant care—at least while the girl is still at school."

Midwives, health visitors and other health workers will not be concerned directly with all of the recommendations contained in the report. The midwife, for instance, is mainly concerned with teaching pregnant women and young mothers about ways of protecting their own health, and about infant care at a time when they have a natural interest in the subject. Most of her teaching will be informal as she goes about her daily tasks, though in part it may be formal as, for instance, in the schools for mothers which should be a feature of every maternity service. A great deal of the teaching will take the form of demonstrations, with only brief references to principles. Exactly what midwives, health visitors, or other social workers will teach must depend to some extent on what the parent(s) already know(s) and on their general educational background.

As many young people know nothing of their own anatomy and physiology, and the names of different parts of the body, instruction is often restricted by the need to avoid technical terms.

When all school-children possess a knowledge of elementary biology

* Report of the Royal College of Obstetricians and Gynaecologists (May, 1944).

and a vocabulary of anatomical and kindred words, the foundation will have been laid for ensuring an informed and wholesome attitude towards sex hygiene, and personal hygiene in general. In addition, it will also be easier for doctors and others to discuss intimate medical problems with their patients.

It has been recommended in many places that periods in the school syllabus devoted to health education should include teaching on the social and human aspects of relationships between the sexes and future responsibilities as parents. Among other subjects whose importance has been stressed are exercise and the healthy use of leisure, footwear, overweight, smoking and dental care.

The Ministry of Health has wide Health Educational functions and there is also a national non-governmental body for Health Education in England and Wales, *i.e.* the Central Council for Health Education whose income is derived mainly from contributions made by local authorities. In Scotland, the Scottish Home and Health Departments and the Scottish Council for Health Education have parallel functions.

A recent report* has recommended the establishment of a new Board to promote Health Education generally in England and Wales and to take over the Health Educational functions of the Ministry of Health and the Central Council for Health Education. A corresponding Board is recommended for Scotland.

The function of these Boards would include trial health campaigns and the training of health educators for employment with local authorities.

These and other recommendations contained in the report are now being considered by the Ministers concerned in consultation with professional and local government bodies.

THE SCHOOL HEALTH SERVICE

This Service, now more than fifty years old, owed its origin to problems which were overtly recognised in the early part of the present century. In particular there was the alarming state of general health and physique revealed by the Boer War recruiting campaign; second and related, the prevalence of neglected and untreated physical defects in children of school age; and third, the special educational needs of certain types of handicapped children, especially the blind and the deaf. From the outset, therefore, the Service was concerned not only with preventive and promotive provisions, but also with treatment and support, though these latter were in the event more slowly realised. School children were thus among the first of the "vulnerable" groups to have a special social-medical service. The evolution of methods and techniques was fairly rapid and by the nineteen twenties, the Service had taken shape. It included routine and special examinations, school clinics (particularly for the treatment of locomotor, eye and ear defects), and special provisions for the handicapped.

The Education Act of 1944, and related subordinate legislation,

* Health Education. Report of a Joint Committee of the Central and Scottish Health Services Councils. H.M.S.O.

extended the scope of the School health service in important directions, though without radically altering principles of organisation, and its status as a cornerstone in the health services seemed to be assured. Very soon afterwards, however, the advent of the comprehensive National Health Service raised new doubts. Some part of the justification for a special service for school children had rested on the fact that medical attention was not otherwise readily available for them without payment, but now school children in common with everyone else became entitled to full medical care substantially free of direct charge. It was argued by some that parts at least of school health work had become unnecessary. The contention neither impressed those responsible for official policy, nor was it sustained by any considerable falling off in attendances at school clinics. There were, however, certain modifications to be made. Financial adjustments, for instance, were made so that hospital treatment was paid for by the hospital and not the Educational Authority; and some specialist clinics passed to the administration of the Hospital Service, while others became a joint responsibility. But in general the Service has remained unchanged.

This is hardly surprising because the arguments urging obsolescence had less force than might at first sight appear. Justification in a changing society for a School Health Service had come to rest increasingly on grounds similar to those which have led to the development of Occupational Health Services, namely a recognition of the need to provide a medical supervision of conditions at work, and in particular of circumstances of special hazard, susceptible groups, and handicapped individuals. If the treatment side of the School health service had become less necessary, its advisory and supervisory role had taken on a new importance. This was especially so with the development of more determined efforts to adapt environment and teaching methods to the special needs of individual children, and with the greater efforts to cater for severely disabled children many of whom had previously been confined to home or institution.

The changing role of the Service brought certain criticisms and modifications of the established and rather rigid provisions based on routine medical inspections. The need for a more flexible approach was reinforced also by the altered pattern of health problems in childhood. Whereas thirty years ago, major crippling and killing diseases due to infections such as bone and joint tuberculosis, rheumatic heart disease and osteomyelitis were relatively common, today severe physical handicap is relatively rare (it is now mainly due to congenital and hereditary conditions such as cerebral palsy and the muscular dystrophies). A similar decline and a comparable change of predominant pattern from infections to congenital and genetically determined conditions has also occurred in relation to other forms of handicap such as blindness and deafness. It is true that minor remediable physical abnormalities such as errors of refraction are very common and justify an inspection of all children soon after entering school. But in general the problems of school age now centre mainly on defects of behaviour rather than physical disease. Whether there has been a

true increase in psychological difficulties, maladjustments, and other behaviour abnormalities, in children of school age is open to question, but there is no doubt that the rising incidence of juvenile crime, teenage venereal disease and premarital pregnancy underline the need for attention to behaviour patterns and problems during the school period. The identification of these problems depends on a close collaboration between school medical officers and teachers and the time saved by reducing the number of routine examinations can profitably be spent on children with such problems.

THE EDUCATION ACT, 1944

The Education Act, 1944, the first instrument of "post-war" planning to become law, introduced far-reaching reforms in the educational system with the intention of matching ability and aptitude with suitable education and training. The educational period was to be divided into three phases—primary, secondary and further education (part-time in county colleges). The school-leaving age was raised from fourteen to fifteen years with provision for a further rise to sixteen years. Children were to attend at a County College for the equivalent of two half-days a week until they reached the age of eighteen years (not yet implemented—1967). There was also to be adequate provision for the further education of persons of any age whose abilities and inclinations qualified them for attendance at a County College.

The Act established the Ministry of Education as the Central Authority; the County Councils and County Borough Councils were named as Local Education Authorities. (In county areas there is provision for the delegation of local administration to certain district councils known for the purpose as divisional executives or in some instances as excepted districts.)

The Local Education Authority is required to provide primary and secondary education suited to the ages, abilities and aptitudes of pupils, and also to provide:

- (a) Nursery schools or classes for pupils who have not attained the age of five years;
- (b) Special facilities to meet the educational needs of physically and mentally handicapped pupils.

This comprehensive educational provision implied that the School health service was to have responsibility for a variety of educational establishments which present problems ranging from cross infection in nursery schools to toxic hazards in the laboratories of a technical college.

Most of the detailed statutory provisions relating to the School health service are contained in the Handicapped Pupils and School Health Service Regulations, 1953. The main features are:

- (1) STAFF. Local Education Authorities appoint a Principal School Medical Officer who is usually but not invariably the M.O.H. of the Authority. A Principal School Dental Officer heads the dental section. Under their administrative direction is a staff of medical and dental officers. School nurses ordinarily

hold the health visitors' certificate. Part of the time of doctors, dentists and nurses is normally devoted to maternity and child welfare and other clinical and epidemiological services for which the Authority is responsible.

- (2) **GENERAL RESPONSIBILITY.** Local Education Authorities are required to ensure that comprehensive medical provision, other than domiciliary care is available to school children in their areas. This does not mean, of course, that they have general powers to provide hospital facilities, but it implies a duty to ensure that hospital authorities are aware of any deficiencies; and there are powers to employ the services of consultants (usually on a part-time basis jointly with the Hospital Authority) for out-patient clinics devoted to the care of school children.
- (3) **ROUTINE MEDICAL INSPECTIONS.** Examination of entrants to, and leavers from maintained schools is compulsory. Other routine inspections are discretionary and L.E.A.'s have in fact been encouraged to introduce alternatives to the routine screening examinations.
- (4) **TREATMENT CLINICS.** The extent and administrative pattern of provisions differ from one area to another. There are always general purpose clinics and dental clinics, and special clinics for visual defects, ear, nose and throat conditions and orthopaedic abnormalities. Often the pattern is comprehensive, including clinics for cardiac conditions, asthma, general paediatrics and child psychiatry. Medical auxiliaries may be in charge of orthoptic, speech therapy and physiotherapy clinics.
- (5) **CONTROL OF INFECTIOUS DISEASE.** Under this heading are included, immunisation programmes, case-finding surveys such as serial tuberculosis testing, and measures to reduce risk of spread of infection at school, *i.e.* the exclusion of cases and contacts, or exceptionally by the closure of schools. Nursery schools are a special problem in this regard, and routine daily inspections are often carried out by a School Nurse.
- (6) **SUPERVISION.** Behaviour at school is an important indication of health; and in particular a change in behaviour such as loss of concentration, loss of vigour, decline in educational performance or a new aggression. Such manifestations are quickly apparent to the teacher and are, thus, a useful source of referral to the school doctor. Major and minor psychiatric abnormalities especially may be detected in this way.
- (7) **CLEANLINESS AND CLOTHING.** Periodic inspection by school nurses is carried out to identify children forming the now diminishing reservoir of infestation with vermin. These inspections are at the same time a means of detecting children whose clothing or footwear is inadequate. L.E.A.'s have

powers to provide suitable clothing, and to recover all or part of the cost from parents or guardians.

- (8) ENVIRONMENTAL HYGIENE IN SCHOOLS. Many facets of the school environment are relevant to health, *e.g.* ventilation, lighting, heating, desk design, playground facilities, wash basin and toilet accommodation and the hygiene of kitchens. The School health service has a duty to report on their adequacy. Unfortunately, the school rebuilding programme has by no means caught up with obsolescence, and consequently many children are still being taught in buildings which are far from ideal.
- (9) HEALTH EDUCATION. An important purpose of both school medical inspection and school clinic is to give an opportunity for the informal discussion of health problems with parents. The School health service also has both executive and advisory responsibilities for the formal health education of school children. This is a very difficult field in which there is room for a great deal of experiment in new techniques. Theoretically it is especially apposite to problems such as the discouragement of cigarette smoking, but in practice little success has so far been demonstrable.
- (10) ASCERTAINMENT OF HANDICAPPED PUPILS. Local Education Authorities have the duty of providing education for handicapped children by special methods, or with special aids, either in separate schools, or if possible in ordinary schools.

Educational handicap necessarily implies a physical or mental disability. But it is important to notice that the mere fact of suffering from a chronic complaint even of the order of severity implied for instance by rheumatic or congenital heart disease does not necessarily or even usually place a child at a disadvantage in an educational sense. Each case has to be considered on its merits, and wherever possible a child is retained in an ordinary school.

The School health service plays an important part in ascertainment. Local Education Authorities have powers, if necessary, to require the parents of any child who has attained the age of two years to submit him to an examination by a medical officer nominated by the authority, in order to determine whether he has a defect of mind or body which may make necessary special methods of education. The final decision rests with the local Education Authority and will take account both of medical and of educational reports. Parents have a right of appeal to the Minister of Education.

Ten categories of handicap are recognised: the blind, the partially sighted, the deaf, the partially deaf, the delicate, the educationally subnormal, the epileptic, the maladjusted, the physically handicapped and pupils suffering from speech defects.

The blind and the deaf are educated at special schools which are usually residential. Provision for other categories includes:

- (a) special schools, *e.g.* for the educationally subnormal and for some physically handicapped children such as spastics;
- (b) special classes in ordinary schools;
- (c) special help in ordinary classes, *e.g.* hearing aids and favourable position for the partially deaf;
- (d) support and treatment in order to maintain attendance at an ordinary school, *e.g.* residential hostels and child guidance clinics for the maladjusted;
- (e) special clinics, *e.g.* for children with speech defects;
- (f) special teaching arrangements in hospital to aid the physically handicapped.

Medical Officers visit special schools at frequent intervals to discuss special problems, to review progress and to supervise general health.

- (11) NUTRITION AND DEVELOPMENT. Two other facets of the duties of L.E.A.'s are specially relevant to child health—the duty to provide free milk and subsidised mid-day meals and provision for physical education. The first is a safeguard in maintaining good nutritional standards and the second a means whereby postural defects and minor orthopaedic abnormalities can be corrected.

CHAPTER V

THE WELFARE DEPARTMENT AND THE CARE OF THE ELDERLY

The National Assistance Act, 1948 was described as a measure to terminate the then existing Poor Law and to make further provision for the welfare of disabled, sick, aged and other persons.

That part of the Act which made provision for financial assistance was, as we have seen (p. 00), superseded by the Ministry of Social Security Act, 1966, whereas Part III, which relates to non-financial assistance, remains unchanged.

Part III of the National Assistance Act requires County Councils and County Borough Councils to provide residential accommodation and other services for persons over the age of 16 years who by reason of advanced age, infirmity, disability or subnormality are in need of care and attention not otherwise available to them.

For the purpose of administering these services, the major Local Authorities each appoint a Welfare Committee and an officer, known as the Welfare Officer or Director of Welfare Services, who is responsible to the Committee for running the Authority's Welfare services.

The main services provided by the Welfare Department are:

- (a) Residential accommodation for a wide range of elderly, infirm, disabled or subnormal people who are unable to look after themselves in their own homes, and cannot obtain the care and attention they require.
- (b) Temporary accommodation for persons who are in urgent need as a result of fire, flood or eviction.
- (c) Welfare services for the Blind, Partially-sighted, Deaf or Dumb, and for other Handicapped Persons (see M. of H. Circ. 32/51, August 28th, 1951).

Other duties of the Department include:

- (1) To arrange for the burial or cremation of any person who has died or been found dead in their area, where it appears that no other suitable arrangements are being made.
- (2) The removal of certain persons in need of care and attention, *i.e.* persons suffering from grave chronic disease, or being aged, infirm or physically incapacitated, or who are living in insanitary conditions, and are unable to care for themselves properly and are not receiving proper care and attention from other persons.

The procedure is for the Medical Officer of Health and another registered medical practitioner to certify that in their opinion it is necessary in the interests of the person to remove him without delay, and thereafter for the Medical Officer of Health or his Authority to apply either to a single justice or to a

court of summary jurisdiction for a removal order. An order for a person's detention may be made for a period not exceeding three weeks in the first instance. (See National Assistance (Amendment) Act, 1951.)

Both the duties referred to are discharged by county borough and county district councils.

In many Local Authorities Health and Welfare departments are combined. In areas where there are separate Welfare Departments, they work closely with other departments of the Authority, and in particular with the Housing or Estates Department, the Health Department and the Children's Department. Medical-care services are not provided by the Welfare Department, which does, however, make arrangements for the treatment of persons for whom residential accommodation has been provided when they are suffering from ailments ordinarily nursed at home.

The Welfare Department is advised on health matters by the Medical Officer of Health, who may arrange for the nursing care of residents and for the general health supervision of premises. In some instances, an Assistant Medical Officer of the Health Department is seconded to the Welfare Department to ensure that the resources of the health department are freely available.

Applicants for Welfare assistance often present themselves in the first instance to the Health Department or the Children's Department whence they are referred to the Welfare Department when needed.

The care of the elderly accounts for a large fraction of the work of the Welfare Department and also frequently engages the Health Department. It is a problem of sufficient importance and size to warrant particular attention.

PROBLEMS OF AGEING AND THE CARE OF THE ELDERLY

Chronological age is not a wholly reliable index of senescence; some are old at sixty, others are still alert and reasonably vigorous at eighty. For the purpose of defining care problems, there are, however, two significant dates in the calendar of ageing.

The pensionable age—65 years for men, 60 for women—usually marks the age of retirement from gainful employment and a consequent radical change in the way of life. From 75 years onwards, an increasing number of people need help and support of one kind or another if they are to remain relatively independent in their old age.

Although the expectation of life in the older age groups has increased very little, there are more and more people living to old age, and the number of very old people is also increasing. At present there are some five and a half million persons of 65 years and over in England and Wales, *i.e.* almost 12 per cent of the total population, and of these some two millions are 75 years and over. It is estimated (see p. 179) that by 1975 the number of persons of 65 years and over will have risen to seven millions.

The characteristics of ageing are both well known and well documented though not easily understood with insight by younger people unless they have had personal experience of caring for an aged parent or professional experience of the care of the aged. As people get older there is a general impairment of physical vigour and mobility and a diminishing range of physical activities. Diminished acuity of sight and hearing are common and a complement of effective natural teeth is rare. The old are readily fatiguable and easily susceptible to cold, sometimes to the point of developing hypothermia. With advancing years, mental faculties also deteriorate though often much later than physical vigour. Sooner or later a failing memory, loss of interest in everyday affairs, an oppressive loneliness (especially after the loss of a spouse), a tendency to be fretful, contrary, querulous and paranoid, and an increasing difficulty in adjusting to change are among the accompaniments of old age. More serious mental disturbances are common, ranging from frank psychotic disorders such as clear-cut depression to irksome aberrations of behaviour, such as aimless wandering, dirty personal habits and disregard for the needs of others. Confused episodes are not uncommon and requires first and foremost, a thorough medical investigation for their assessment. Underlying or concurrent bodily disorders are common in the mental disturbances of the old who inevitably carry the accumulated disabilities and disease sequelae of a lifetime. At the extreme of intractability is the long-term, bedridden, confused incontinent whose care imposes on the family a burden too crushing to be borne without outside help. The usual picture is less gloomy. Probably four out of five old people are mentally normal and less than one in ten are subject to a frank mental breakdown or unacceptably disordered behaviour. There are few diseases peculiar to old age, but there are many disorders and disabilities to which the elderly are especially prone. Prominent among these are chronic bronchitis, cardiac insufficiency, athero-sclerotic changes, cystitis and prostatic enlargement. Arthritis, foot deformities and other conditions often lead to reduced mobility and make it more difficult for the old person to get about. A combination of factors make them especially liable to falls and other accidents. Poor appetite, indifference and lack of money put the elderly at special risk of nutritional anaemia and other nutritional and vitamin deficiencies. The study of old age (gerontology) and the medicine of old age (geriatrics) points two important lessons: first, that physical health and mental health are highly interdependent in the old; and secondly, that the well-being of the old is especially sensitive to family relationships and other social circumstances.

With the qualification that ageing itself is not preventable, the objectives of geriatrics differ little from those of health and social services at other ages. There are three basic aims: to postpone the effects of ageing as long as possible; to prevent chronic sickness by early diagnosis and treatment; and to reduce physical disability as much as possible. A factor of great importance in achieving the first aim is the maintenance of a wide range of interests and activities, and ensuring that the old person retains a maximal independence in the family and in the

community. Preparation for retirement by developing interests and hobbies and cultivating a healthy attitude of mind towards retirement is important in ensuring that activities do not lapse. This is essential for maintaining mental and physical vigour in the years of decline. In some areas, retirement advisory clinics have been established. It is important also that any necessary adjustment in housing and living circumstances should be made in good time before the will and ability to make them are eroded by enfeeblement and loss of initiative.

Periodic health examinations for screening and advisory purposes are useful for the early detection of disease and timely remedial action. Surveys of old people by health visitors and medical referrals when indicated serve a similar purpose. In both, special attention is given to housing and social circumstances and to the nutritional state, mobility and the mental state of the patient. Screening tests for glaucoma, cataract, visual and auditory acuity, Hb. level and diabetes are often done in addition at the geriatric clinics which have been established in some areas. Although further research is needed to ascertain the precise value of these tests, enough is known to establish the value of medical surveillance for old people who are willing to accept periodic examinations by the general practitioner or at special clinics.

The great majority of old people, with or without outside assistance, live in relative independence either alone or with grown-up children or other relatives. Many require to be admitted to Welfare homes and a few need hospital care. It is often far from easy to decide which is the best form of care for an individual, but there is general agreement that lengthy hospitalisation—which not uncommonly spells permanent hospitalisation—should be avoided whenever possible.

Public responsibility for the care of the elderly is shared by the local authority, the family doctor and the hospital service. In the local authorities' contribution, the Welfare, Housing, and Health Departments each play a part. The local authority also co-ordinates a wide range of voluntary services for the care and comfort of the elderly, and often maintains a register of old people and arranges periodic visits to assess their problems and needs. An advisory liaison committee consisting of the Welfare Officer, the Medical Officer of Health, a general practitioner, a specialist physician and a psychiatrist is appointed in most areas.

The home services now available for the elderly are well known. In addition to health visiting, home helps and home nursing, they include "meals on wheels", chiropody and physiotherapy services, visiting, and social callers and errand boys provided by religious and other voluntary organisations. Laundry services, night sitters-in and the loan of bed linen and sick nursing equipment are also common provisions. The admission on a temporary basis of the old person into a Welfare Home is a measure which relieves relatives for short periods so that they can take a holiday or be given support during times of family stress from sickness or other causes. Day-centres where the old person can enjoy companionship and have a mid-day meal are commonly

maintained by local authorities or voluntary agencies. In many areas voluntary helpers offer car transport to enable old people who cannot get about to use day-centres or attend clinics.

In some instances, old people's homes are in purpose-built premises; in other instances, in adapted large private dwellings acquired by the local authority.

Such is the wide range of services now widely available for the socio-medical care of the elderly.

CHAPTER VI

THE CHILDREN'S DEPARTMENT, ADOPTION
AND THE ILLEGITIMATE CHILD

The Children Act, 1948, which is based largely on the Report of the "Care of Children" Committee* published in 1945, is a comprehensive enactment devoted to the public care of children deprived of a normal home life.

The central authority responsible for the administration of the Act is the Home Office and the authorities responsible for its local administration are the major local authorities, *i.e.* county councils and county borough councils. These authorities are required to appoint a Children's Committee and a Children's Officer, who is responsible for carrying out the functions of the authorities' Children's Department.

Many Children's Officers were recruited originally from the probation service and other areas of social field work. The central control of appointments made by local authorities is ensured by the requirement that short lists of candidates have to be approved by the Home Office. Children's Officers, now being appointed, have often pursued University courses of Applied Social Studies with specialisation in child care, and an increasing proportion of the staffs of child care services possess the Letters of Registration offered by the Central Council for Child Care established by the Home Office.

The main duties of the Children's Department are:

- (1) Care and supervision of children under the provisions of the Act.
- (2) Supervision of children maintained apart from their parent or guardian for reward.
- (3) To arrange for adoption themselves or by supervision of "third party" adoption cases.
- (4) Registration of Adoption Societies.
- (5) Appearance of children before Juvenile Courts, and the care of children committed to the Children's Committee by the Courts.
- (6) Provision and management of remand homes.
- (7) Management of approved schools set up by the Home Office.

The Children and Young Persons Act, 1963, enlarged the scope of the work undertaken by Children's Departments under the earlier Act by extending their powers to promote the welfare of children. In particular, the more recent Act sought to diminish the need to receive children into care or to keep them in care under the earlier Act by making available the necessary guidance, advice and material assistance.

* A committee appointed by the Ministers of Health and Education and the Home Secretary. Its Chairman was Miss Myra Curtis and its Report is often referred to as the Curtis Report.

The Act also contains provisions relating to approved schools and the employment of children and young persons.

Through their Children's Departments, local authorities are required to promote the best interests of the children in their care and to give them opportunities for the proper development of their characters and abilities. In doing so, they are guided by the principle that as far as possible children in their care should have the facilities and services which children in the care of their own parents usually enjoy.

Children may now be received into the care of local authorities up to the age of 17 years and may remain in their care up to the age of 18 years without the authority assuming parental rights.

In the larger Children's Departments there are usually specialised sections for adoption, probation and so forth, each of them being responsible for supervising the assistance given to individuals and families by field staffs or caseworkers in their respective spheres.

The Medical Officer of Health no longer has any responsibility for Child Life Protection and Adoption procedures. He does, however, advise the Children's Committee on the health and medical care of children for whom they have responsibilities.

Illegitimacy, Legitimation and Affiliation

During the decade which preceded the outbreak of war, about one birth in every 22 live births—(4·5 per cent)—was illegitimate. This proportion increased during the war, reaching a peak level in 1945 when one birth in every 11 live births (9·3 per cent) was illegitimate. By 1960 this had fallen to one in every 18 live births (5·4 per cent). The next two years showed a progressive rise in these figures, and by 1962 one in every 15 live births (6·6 per cent) was illegitimate. In 1948, 11,049 babies were born in wedlock to girls under 20, and during this same year no fewer than 19,704 babies were born out of wedlock to girls in the under-20 age group, *i.e.* these babies were either illegitimate or conceived before marriage. By 1961 the figure for babies conceived out of wedlock to mothers under 20 years of age had reached 41,048, *i.e.* it had doubled.

Most local authorities assist unmarried pregnant women and mothers in various ways, chiefly through the Maternal and Child Welfare section of their Health Department. The help of their Children's Officer may also be required.

It is usually easy to make arrangements for the mother's confinement but the subsequent care of the child often involves difficult social problems.

There are many solutions, but whichever is adopted it is a good thing that the mother and child should be kept together for some weeks at least to give the mother time to know her baby and make a more balanced decision whether to keep her baby herself or to have it adopted. Unless the circumstances are wholly against it, this period of time for consideration should always be given.

The problem is at its easiest when the mother is able to maintain and

care for the child in her own home or the home of her parents or other near relatives though the lack of a father leaves a gap which cannot always be filled.

If no such arrangement is possible Mother and Baby Homes exist where the mother can go for a month or two before the baby is born and where she can remain for a short time after the confinement while she makes up her own mind about the child's future.

Hostels are provided for the mothers who decide to keep their babies but have no home to which they can go after leaving the Mother and Baby Home. Usually the mothers take up outside employment and the Hostel staff care for the babies by day. This gives the mother a second "breathing space" to find permanent accommodation for herself.

Mother and Baby Homes and Hostels are run by the Maternal and Child Welfare Department of the Local Authority Health Department or by recognised Voluntary Bodies such as the Church of England Diocesan Moral Welfare Association, the Salvation Army or the Roman Catholic Church and the standards maintained are nowadays usually very good. When the mother eventually finds suitable private accommodation for herself and the baby most Local Authorities through their Maternal and Child Welfare Departments can arrange to care for the baby by day in a Day Nursery or, through their Maternal and Child Welfare Department, advise her of a woman "Daily Minder", see p. 68.

The Education Committee of the Local Authority are empowered to provide nursery schools for children from two to five years old but these fill a comparatively small role in the care of children whose unsupported mothers must work, as they provide no cover for the child under two years old and no cover for school holiday periods. The shorter hours of school opening also limit the help a Nursery School can give these mothers but where a relative can care for the child part-time Nursery Schools can play their part in giving wider social experience and an element of stability to the child.

If the mother decides not to keep her child, adoption is the best choice of care for the baby, though not always a completely satisfactory solution of the problem. A well-chosen adoption goes far to ensure that the child is brought up as a member of a family with the love and security which goes with this and which is necessary for its full development. Adoption confers upon the child the status of the family into which it is adopted.

Many infants whose mothers do not wish to have them adopted, and older children deprived of a normal home life, are fostered by the Children's Department of the Local Authority with approved foster parents. This allows the child to be brought up in normal home surroundings. (See Children Act, 1948—Children and Young Persons Act, 1963, and the Boarding Out of Children Regulations, 1955.)

The mother without consulting the Local Children's Department may foster the child by private arrangement or leave it with a paid "daily minder" or in a day nursery. In each case the Local Authority

has powers of supervision (see Nurseries and Daily Minders Regulation Act, and Child Life Protection, pp. 68 and 95).

If suitable foster homes are not available most Local Authorities and Voluntary Societies look after the children in their care in Family Group Homes accommodating not more than 10 children and looked after as far as possible by a married couple or by a Housemother and Deputy Housemother; again the aim is to give the children as normal a home life as possible. Many of the children in question are physically and emotionally disturbed by the circumstances which have deprived them of a normal home life. In order that house-parents shall be able to give the type of care needed the Home Office runs a short course on residential child care, stressing the special needs of these children. Most forward-looking Children's Departments encourage their residential staff to attend these courses.

Large Orphanages and Institutions are rapidly becoming a thing of the past in the care of children.

Legitimation

By the Legitimacy Acts, 1926 and 1959, a child becomes legitimate by the subsequent marriage of its parents. Provision is also made for treating as legitimate some children of void marriages. A marriage may be void because it is bigamous, or because one of the parties is under 16 years old, or because of consanguinity, or failure to observe some of the necessary forms and ceremonies.

If, however, one or both of the spouses had a reasonable belief that the marriage was valid at the time the child was conceived the child is to be treated as legitimate.

Affiliation

A single woman, widow, or married woman living apart from her husband may before the birth, or any time within a year after the birth to her of a child, apply to a justice for a summons against the alleged father who must, as a rule, be living in England or Wales at the time of the application. At the hearing before a court of summary jurisdiction, the woman's statement must be corroborated by other evidence, such as letters, proof of cohabitation or payments for the maintenance of the child. If the mother is a married woman, evidence must be submitted to prove non-access by the husband.

The length of the gestation period is sometimes in question and a doctor or a midwife may be required to give evidence of prematurity or protracted pregnancy.

If the court is satisfied that the defendant is the father of the child they may make an order on him to pay a weekly sum not exceeding £2 10s. towards the maintenance of the child, which is otherwise the mother's responsibility. This may continue up to the age of 16 years, and may be extended by the court up to the age of 21 years if the child is receiving full-time education.

This order is termed a Maintenance Order (old term Affiliation

Order). The father may also be required to pay expenses incidental to the birth.

Under the Legitimacy Act, 1959, the alleged father of the child may apply to the court for access to the child or even for custody of the child. A Maintenance Order may be varied or discharged by the court on the application of either parent.

Adoption

About 15,000 children are legally adopted each year in England and Wales. The law governing adoption is contained in the Adoption Act, 1958, and the Adoption Act, 1960, which have replaced previous Adoption Acts.

In all adoptions the first consideration should be the interests of the child, but the Adoption Acts also safeguard the prospective adopters.

In most cases prospective adopters are childless couples who want to help a homeless child but occasionally an adopter may wish to have an older child from the wrong motives. They may, for instance, regard it as potential help for the housewife, for her daily work, etc., or as an outlet for an emotional inadequacy; such reasons should not be countenanced. A mother who has just lost her own baby may ask to adopt but usually it is better to wait until she has recovered from her emotional upset and is certain that she genuinely wants to pursue the matter. Again a couple's request to adopt may be primarily because they want company for another child—only if this is really coupled with a desire to help a homeless child should this be considered.

There are four ways of adopting a child:

- (1) Through the Children's Officer of the Local Authority.
- (2) Through an adoption society which must be approved by and registered with the Local Authority and which must not be run for profit.
- (3) Through a Third Party—usually a doctor, a nurse or it may be a private person.
- (4) Direct Placing by the mother or other legal guardian without an intermediary.

Third Party and Direct Placing usually involve little or no attempt to select the right child for the right adopter and both must be done privately for it is illegal under the Act (a) to advertise a child for adoption or (b) for persons to advertise as prospective adopters. It is also illegal to pay an agent to obtain a child for adoption.

Important provisions of the Adoption Acts include the following:

Adopters must be at least 25 years old and at least 21 years older than the child. In the case of a married couple, one partner must be 25 years old or over. There are two exceptions to this where the age of the adopter is not relevant:

- (1) Where the prospective adopter is the child's natural father or mother either adopting alone or jointly with their marriage partner.

- (2) Where a relative of the child (brother, sister, uncle, aunt) wishes to adopt they must be at least 21 years old, but there is no other restriction.

There is no upper age limit for adopters (this enables grandparents, etc., to adopt).

Married couples may apply jointly or one spouse may apply provided they have the consent of the other.

This consent can be dispensed with if the second partner:

- (a) cannot be traced;
- (b) is incapable of giving consent;
- (c) is legally separated.

Except in very special circumstances a man may not be the sole adopter of a girl.

Two friends or relations, whether of the same or opposite sex, may not adopt jointly. The person to be adopted must be under 21.

Anyone who intends to adopt a child must give three months' notice in writing of their intention to the Children's Department of their area. It is then the duty of the Children's Officer to enquire into the background, including their health. Every person other than the child's parents, guardian, or relative, who takes part in any negotiations of which the purpose is adoption must notify the Children's Officer in writing, not less than two weeks before the child goes to its new home.

If the Local Authority consider that premises (as distinct from persons) where the child would live are unsuitable, they may give notice in writing prohibiting a person from receiving the child in the premises.

The child must be at least six weeks old before the mother may give legal consent to its adoption. It may, however, be placed with prospective adopters before six weeks old, if the adopters are willing to take the risk that the mother may change her mind and take her child back. This she may do at any time before the child is six weeks old.

When the child is six weeks old the mother or guardian signs a form before a Justice of the Peace consenting to the placing. Thereafter she cannot remove the child from the prospective adopter's care without permission of the court.

An adoption order may not be made unless the child has been in the continuous care of the adopters for at least three months from the date when the mother gave her consent to placing the child.

If the putative father contributes to the child's keep either voluntarily or under a Maintenance Order, his consent to the adoption must be obtained.

Either the mother or the putative father may object to the adoption until such time as the adoption order is made, but if the court considers their objections unreasonable it will disallow it and proceed to make an order.

The bar to persons not ordinarily resident in Great Britain receiving a child for adoption has now been removed, provided that one of the applicants spends the required three months probationary period in

possession of the child, prior to adoption, in the United Kingdom; and both applicants have been in the U.K. for at least one of the three months.

During the three months probationary period before the making of an adoption order the child is supervised by the "guardian *ad litem*" usually the Children's Officer or a Voluntary Adoption Society registered with the Local Authority, and during this period is referred to as a Protected Child.

Before making an adoption order the court is given a full medical report on the child including the results of a blood test for syphilis and a urine test (including a test for phenylketonuria).

Adoption Orders may be made by a Judge in a County Court, by Magistrates sitting in a Juvenile Court or by the High Court, the last being expensive and therefore less frequently used. The applications are heard privately with no public or press present and the adopters have the right to remain anonymous.

Once the Adoption Order is made by the Court the child is in the same relationship legally to his adopted parents as he would be to his natural parents.

Child Life Protection

Provisions designed to protect child life include the following:

Any person who proposes to foster a child not already in his care for more than one month shall give written notice to the Children's Department of the Local Authority not less than two weeks before receiving the child unless he receives him in an emergency. In that case he must notify the Local Authority not later than one week after he receives the child, stating the premises where the child will be kept.

If the foster parent changes his address he must notify the Local Authority not less than two weeks before the change, or if the change is made in an emergency he must notify the Local Authority not later than one week after the change. If the new address is in the area of another Local Authority the first authority are responsible for notifying the second authority and giving them all particulars of foster child and foster parents.

The Local Authority may decline to approve proposed foster parents or premises where they propose to keep a child if in their opinion they would be detrimental to the child. In either case they may prohibit the proposed fostering.

If a foster child dies or is removed or removes himself from the care of the foster parent, the foster parent must notify the Local Authority and the person from whom the child was received in writing within 48 hours. An officer of the Local Authority authorised to visit foster children—usually an officer of the Children's Department—may inspect any premises where foster children are kept.

A Local Authority through their Children's Department may:

- (1) Specify the number, age and sex of the foster children who may be kept at any one time in the premises.

- (2) Specify the accommodation and equipment to be provided for the children.
- (3) Arrange for the medical examination of the children usually at six-monthly intervals and for general medical care.

A person will not be allowed to maintain a foster child if:

- (a) An order has been made removing a child from his care as an unfit person or he has been convicted of any offence of cruelty to children.
- (b) A Local Authority have refused or cancelled his registration under the Nurseries and Child Minders Act unless the new circumstances are exceptional.

If a foster parent fails to comply with any of these regulations he is guilty of an offence.

If a juvenile court is satisfied on the complaint of the Children's Department that the foster parent or proposed foster parent or the premises where the child is kept is detrimental to the child they may make an order to search for the child and remove him to a place of safety. The same applies if there is any suspicion that certain offences have been committed against the child or that it has been exposed to unnecessary suffering and entry is refused. Any refusal to allow the foster child to be visited by an authorised officer of the Children's Department shall be regarded as giving reasonable cause for such a suspicion.

In the case of imminent danger to the child a Justice of the Peace can make an Order for his removal to a place of safety on the application of an authorised officer of the Local Authority. The officer, or a constable, can then remove the child to a place of safety. The Children's Department must if practicable inform the child's parent or guardian of the removal.

Another requirement designed to protect the child is that a foster parent may not insure a foster child's life.

Recent Welfare Legislation Seen as a Whole

No less than six major Acts and a number of others have been discussed in this and the preceding chapters. Their provisions cover such a wide and varied field that they are not easily comprehended as a whole. It may, therefore, be helpful to display the main Acts in a manner which brings out the broad purpose of each and their dependence on each other in the "welfare state".

I Financial aids are provided by the Central Government under four Acts:

National Insurance Act, 1946.

National Insurance (Industrial Injuries) Act, 1946.

Ministry of Social Security Act, 1966.

Family Allowances Act, 1945.

- II Physical care and attention of the non-sick is provided by the major Local Authorities, on whom duties are placed by three Acts:

National Assistance Act, 1948 (that part relating to the care of persons over 16 years, especially old people and people with disabilities).

Education Act, 1944 (providing *inter alia* for the medical care of the school child).

Children Act, 1948 (care of non-sick persons under 18 years).

- III Medical care of everybody, young and old, sick and defective, whether in need of other publicly provided aid (I and II above) or not, is provided partly by the Central Government (*e.g.*, hospital and general practitioner services), and partly by the Local Health Authorities under

The National Health Service Act, 1946.

CHAPTER VII

THE HEALTH VISITOR, SOCIAL WORK
AND FAMILY CASE REPORTING

The health visitor is the pre-eminent socio-medical worker in the health departments of local health authorities. She is a State Registered Nurse and a State Certified Midwife* who also holds a certificate or diploma in health visiting.

Some 8,800 (including 900 part-time) health visitors, or about one per 6,000 of population, are at present employed in England and Wales. There are many unfilled vacancies in the service and a quarter of those practising are approaching retirement. It is estimated, moreover, that under the Ten-Year Development Plan for the Health and Welfare services, a 50 per cent increase in their number will be needed before 1976.

Before 1919, there was no recognised form of training for health visitors. In 1925 the Ministry of Health made regulations prescribing the qualifications a health visitor should possess, and a year later the Royal Sanitary Institute (now the Royal Society for the Promotion of Health) became the central examining body for the health visitors' certificate. Since then courses of training for the certificate have been offered at a number of centres by local authorities, professional bodies and Universities.

In 1962, a Council for the Training of Health Visitors consisting of a chairman and 31 other members was established under the Health Visiting and Social Work (Training) Act, 1962; and in 1965, revised Training Rules prepared by the Council were approved by the Ministry of Health. The Council approves training courses and arrangements for the conduct of examinations, and has powers to provide courses for further training and to engage in research.

Under the National Health Service (Qualifications of Health Visitors) Regulations, 1964, the possession of a certificate issued by the Council is one of the conditions for employment as a health visitor in England and Wales.

The new syllabus of training, which envisages that the health visitor's work may be carried out either in small geographically defined areas or by working within general medical practice, is designed:

- (a) to sharpen the student's capacity to perceive early deviations from the normal;
- (b) to give her knowledge of various statutory and voluntary agencies which may assist in any particular family situation;
- (c) to provide practice in the working out of a programme of help for the individual where this is required;
- (d) to prepare her to select the method of health education likely to be the most successful in any particular instance.

* Or has such other midwifery training as the Council for the Training of Health Visitors may approve.

To meet these aims the syllabus is divided into the following broad headings:

1. Development of the Individual.
2. The Individual in the Group.
3. The Development of Social Policy.
4. Social Aspects of Health and Disease. This section expands very considerably the teaching at present given on the community health services, and the methods of determining priorities within it, and on current medical problems affecting the state of public health.
5. Principles and Practice of Health Visiting. This section defines the component skills involved in health visiting, dividing these into the act of interviewing, the means of assessment, organisation of work and the forms of health education which may be used.”*

Considerable emphasis is placed on the need to achieve greater depth in fieldwork experience and to this end designated field instructors who are experienced, practising health visitors are appointed to teach students in the field. Each instructor is responsible for not more than three students and has a case load of not more than 300 families. The approved course of training for health visitors lasts for a calendar year which includes a terminal three months of supervised practice. At present there are 32 Health Visitor Training Schools, and in addition to post-registration courses for state registered nurses, there are five integrated courses of training which prepare the student concurrently for registration with the General Nursing Council and for the Council's Certificate for Health Visitors.

THE HEALTH VISITOR'S DUTIES

Originally, the health visitor worked mainly in the M.C.H. services, but for many years she has also usually had duties in connection with the control of communicable diseases, the care of the tuberculous and in the school health service. The health visitor has long been recognised also as a medical-social worker, health educator and an important link between medical-care and other social services. Since 1948, the scope of her duties has been greatly enlarged in the whole area of care in the community. In much of her work her concern is with the problems of individuals as members of the family unit. An important aspect of her work is to identify socio-medical needs and to bring them to the attention of services which can meet them. In this regard she is concerned with the detection of problems arising out of ill-health, ageing, handicap and social inadequacy and the assessment of vulnerable groups in the community. She also has extensive advisory and health educational functions. Her basic training as a nurse enables her to understand the implications of sickness and disability and her special

* First Report of the Council for the Training of Health Visitors, 1962-1964.

training familiarises her with the services available to help, in particular, the socio-medical casualty in the home.

It is less easy than formerly to particularise the health visitor's duties, not only because many tasks she used to undertake single-handed are now shared with other social workers, but also because of the wide variation in the use of health visitors in different areas. In rural areas, for instance, she often combines health visiting duties with district nursing and midwifery, and in the county boroughs (and for some purposes in counties) there is considerable specialisation. Thus, in some areas the health visitor may work wholly or mainly in the M.C.H. or school health service or as a specialist worker acting in liaison between hospital services and care in the community.

References are made to the duties of health visitors in many places in the book; the range of her activities are epitomised below. They include:

1. M.C.H. duties—home visiting of infants and attendance at Infant Welfare Clinics; and visits arising out of pregnancy and child-bearing, including family planning and infertility problems. (See also p. 180.)
2. Control of communicable diseases including immunisation. The health visitor carries out investigations in connection with the prevention and control of infectious diseases and makes reports to the Medical Officer of Health. She is usually concerned with the personal or clinical aspect, whereas the public health inspector usually deals with insanitary housing conditions and disinfection (see also p. 153).
3. Health education. In addition to the educational work she undertakes on the occasions of home visits and consultations at clinics, the health visitor often gives short talks on child care and hygiene to groups of mothers. These talks are commonly arranged at the welfare centre on the same day as the mother attends with her child for consultation (see also p. 62).
4. School health service duties:
In this service the health visitor is an important link between school and home in matters of health and social relations (see also p. 78).
5. Socio-medical case work in the home. In this aspect of her work the health visitor plays an important part in community care (see also p. 69). As we have seen, she is now concerned with the health and welfare of the family as a whole and is often instrumental in drawing attention to socio-medical problems and either giving advice herself or obtaining it through the health department. In appropriate cases, she works closely with the family doctor and in many areas carries out health visiting within group medical practice. Working in association with hospital doctors and hospital social workers she plays a part in securing continuity of care as between hospital and community.

Besides M.C.H. and school work, the main categories of problems which claim the health visitor's attention are:

1. Care of the elderly.
2. Physical illness and handicap, *e.g.* tuberculosis, blindness, diabetes, peptic ulcer, asthma, multiple sclerosis, arthritis and other locomotor disorders.
3. Care of the mentally sick and subnormal.
4. Social inadequacy.
5. Adoption and fostering.
6. Broken families, *e.g.* widows and deserted wives with children.
7. Settlement of immigrants and expatriots in some areas.

A significant development in recent years has been the organisation by many local health authorities of schemes for the attachment of health visitors to general medical practice (at the present time about 1,000 health visitors are so attached), which may be regarded as a step towards the provision of domiciliary medical care teams consisting of the general practitioner, the health visitor, the district nurse and possibly the domiciliary midwife.

Experience has already shown the value to the general practitioner of having a socio-medical worker of the health visitor's competence at his side to investigate the social aspects of patients' problems and to give advice in particular on matters cited in the foregoing paragraph.

There is little doubt about the desirability of making attachment schemes, in one form or another, a general provision in general practice throughout the country. The obstacles which stand in the way of doing so at present—the relatively slow development of health centres and group practice, the lack of overall planning in the general practitioner service, and organisational difficulties—were discussed at some length in Chapter III (see p. 47).

SOCIAL WORK TRAINING

The first full-time course for social workers was held in the School of Sociology in London in 1903. Later, social work training came to be regarded as a preparation for work in a particular social service with emphasis on the structure and function of the service rather than on the cause of social breakdown, *e.g.* child care course, probation officer's course, medical and psychiatric social work course and family casework course.

This trend towards specialising was carried further after 1948 when a greatly increased number of social workers were needed in the probation and hospital services and in voluntary organisations. In 1954, the London School of Economics established "generic" casework or applied social studies courses based on general human needs rather than on the problems of particular groups. The courses last three or four years and lead to a University degree, diploma or certificate in social science. The most recent development is a two-year course held in University extra-mural departments or colleges of further education (Younghusband Course). The focus in these courses is on how human needs can be met through social services. Other courses now offered include: two-year

child-care courses, special one-year emergency courses for "middle grade" unqualified social workers in the health and welfare services held at the National Institute for Social Work Training, and University courses leading to a degree, diploma or certificate in social work. The last-mentioned courses are of one year's duration for social science graduates and 17 months for others.

Non-University courses are now offered on medical-social work, probation, child care, youth leadership and advanced casework (Tavistock Clinic).

The Council established under the Health Visitor and Social Work (Training) Act, 1962, is charged with the duty of promoting the training of social workers in the Health and Welfare services and awarding a national certificate.

FAMILY CASE-REPORT

Whatever the nature of the problem, family case-work comprises four elements: ascertainment of the facts; appraisal of the situation; identification of the assistance needed; and the provision or procurement of the help and support required. The case report, which is a record of the investigations undertaken, recommendations made and actions taken, is essential for the later information of the case-worker herself, for the information of others whose advice and assistance are solicited, and generally for administrative and evaluative purposes. Although the scope and content of the record varies greatly from case to case, it is usually convenient that a case-report should be prepared under an orderly sequence of headings. The following arrangement is proposed as a general schema from which items might be selected according to the character of the problem under review.

Schema for the Family Case-report

I. Introductory particulars.

Name, address, file reference, date, etc.

Source and grounds of reference, *i.e.* the case was referred to me by ———— for the following reasons ————.

Previous knowledge of case—personal, professional, hearsay, documents.

Visits, and sources of information in course of visits, *i.e.* visits were made (to the home, to ———— etc.) on ———— dates ———— and information as to ———— was obtained from ————.

II. Brief statement on the general character of the case.

E.g. the case is that of a partially-sighted old man (aged —) living alone in a large house. There are no nearby shopping facilities and no convenient transport.

III. General background.

The home or dwelling. The neighbourhood and residential environment. (See below.)

Household and family structure.

Social circumstances.

E.g. social class, occupation, dependence, proximity of near relations.

Financial status, *e.g.* earnings, other income, savings.

Personal attributes—education, level of intelligence, ability to cope, emotional stability, social activities—of client and others, *e.g.* parents of an infant.

Health background, *e.g.* serious illness, incapacity, handicap, mental disorder, subnormality.

Attitudes towards problem—of client and other members of household.

Duration of problem—temporary, long-standing, permanent.

IV. Details of case.

General description, special features, special difficulties and obstacles.

Assessment of the situation and the needs.

V. Recommendations for assistance.

Medical care.

Material assistance, *e.g.* rehousing, appliances.

Personal assistance, *e.g.* home nursing, domestic help, day centre, nursery.

Advice and education.

Financial.

Surveillance—likely duration.

VI. Referrals and consultations.

VII. Progress reports.

Most of the subjects listed under the foregoing headings are discussed at some length in other places and need no further elaboration here. We have not, however, considered elsewhere the social aspects of housing and it is convenient to do so now.

HOUSE AND HOME

The house or dwelling has a far-reaching influence on health and social well-being during the entire life span of most people, and is a background against which many socio-medical problems must be studied and remedied. In reviewing the housing situation as an aspect of case-work, the social worker will keep in mind two fairly obvious facts. First, from the point of view of family life, a dwelling cannot be considered in isolation from its location, surroundings and social amenities; secondly, a satisfactory dwelling is not synonymous with a comfortable home.

The good home is not merely a house for an isolated family group. It is the place from which families as a whole and individual members of families reach out to take part in community activities of one kind or another. Dwelling-houses, however good, are not socially self-sufficient

units. They need the support of schools and churches, shops and cinemas, playgrounds, clubs, transportation, doctors' surgeries, midwives' houses, welfare centres, hospitals, and so forth.

In other words, the house has to be considered in relation to the neighbourhood, estate, countryside, town, village and community in which it is located.

Likewise, such matters as structural soundness, sanitary provision and domestic amenities cannot be assessed from the social worker's point of view without taking into account family requirements and problems.

It is one thing, for instance, to provide facilities for heating a house and quite another thing to ensure that it can be kept comfortably warm. The cost of fuel, the manner of using it, domestic purchasing power and household labour resources all affect the issue. These matters are bound up not only with the design of the dwelling but with the habits and resources of the family living in it. They are often factors of prime importance to the health and comfort of the infant and the elderly especially.

The following schedule, from which the case-worker can select items for appraising a dwelling, is largely self-explanatory.

ITEMS TO BE TAKEN INTO ACCOUNT FOR THE APPRAISAL OF A DWELLING AND THE RESIDENTIAL ENVIRONMENT

I. THE RESIDENTIAL ENVIRONMENT.

Type of area, *e.g.* residential, council estate. General standard of housing provision. Climate. Site density. Open spaces. Layout and street design. Proximity of industry and commerce.

Community services and facilities.

Stores and shops. Schools. Community halls and clubs. Places of worship. Medical care facilities. Nurseries. Public transportation. Parks, recreation groups and access to open country. Libraries. Street lighting.

Hazards.

Steep gradients on streets. Road traffic. Dangerous crossings. Air pollution. Noise, *e.g.* from aircraft, factories, railway shunting yards. Risk of flooding, landslides, etc. Vandalism, hooliganism.

II. THE DWELLING.

Type, *e.g.* detached house, flat, tenement, lodging, caravan, cellar basement.

Ownership, owner-occupied, rented (private landlord, Council house).

Number of rooms, size and arrangement (living, sleeping, kitchen, bathroom).

Stairways and hall—lighting, handrail, steepness.

Yard and garden—paths, steps.

State of repair and maintenance—dampness, decorations, cracked and leaning walls, holes in floors, broken windows, ill-fitting doors.

Sanitary and other facilities—lighting, heating, ventilation, water supply, toilet and bath, cooking and food storage, laundry facilities, refuse disposal, storage space.

III. ACCIDENT AND OTHER RISKS.

Fire hazards. Escape provisions. Unguarded fires and radiators. Defective electric wiring. Vermin, rodents, insects.

IV. SUITABILITY FOR OCCUPANTS.

E.g. size, convenience and safety for old person. Sleeping accommodation for infants and adolescents.

In using the above schedule as a guide, the social worker will not go far wrong if she recalls that the home is the place where families are reared, and where the sick and aged are often cared for, where most people pass the greater part of their sleeping and waking lives, and where the housewife works and spends almost all her time—in a word, if she takes into account the whole family situation and family resources in relation to the physical dwelling and its setting in the community.

CHAPTER VIII

THE MATERNITY SERVICES AND THE
MIDWIFE**Historical Note**

It would seem from historical records that in all societies women have been helped in child-birth by other women who professed more than ordinary acquaintance with the technique of delivery by virtue of practical experience.

To all intents, however, it was not until the 17th century that there was any systematic study of child-birth in this country and it is to William Harvey, "the father of British midwifery", that the earliest study of obstetrics is attributed. The interest of doctors, who were all men in those days, was encouraged by a fashion which originated in the Court of Louis XIV, and by the use of forceps by a Dr. Peter Chamberlen in this country. Louis used a Court surgeon by the name of Jules Clement to deliver in secret a favourite mistress and the term "accoucheur" gained currency as the practice of employing doctors became fashionable.

Chamberlen made attempts to organise the training of midwives, but only after the passage of two centuries was the need for systematic and controlled training recognised in England.

Wm. Smellie, a Scot who practised midwifery in London during the early 18th century, systematised obstetric knowledge and laid a secure foundation upon which the direct contribution of medicine to the practice of midwifery was built.

During the 19th century midwifery benefited from technical advances which medicine owed to the study of anaesthetics and micro-organisms. The speciality of gynaecology was born, and the training of medical students in midwifery was begun.

In 1872 the London Obstetrical Society instituted a voluntary examination for midwives and issued a certificate of proficiency. In 1881 the Midwives' Institute* was founded, but their attempts to regulate the practice of midwifery by law were not successful until 1902 when the first Midwives Act was passed.

On the technical side, the outstanding features of the 20th century have been the development of ante-natal care and the recent application to obstetrics of chemotherapy and transfusions. Administratively, the implementation of successive Midwives Acts, the growth of institutional midwifery and the recognition of the role of the skilled midwife in normal midwifery are noteworthy.

In broad outline there seem to have been three distinct phases of development.

During the first phase midwifery was undertaken by the untrained, unaided midwife. This practice gave place to one in which the doctor was aided by a handywoman, and doctors developed the technical

* Now the Royal College of Midwives.

and scientific background of obstetrics and did much to secure the training of midwives. During the third phase, doctors and midwives worked together, and relatively recently the conduct of normal labour became the acknowledged province of the midwife. It is during this phase that the midwife has become a member of a professional team whose other members are the general physician and the specialist obstetrician.

As we have seen legislation on midwifery in Britain is relatively recent. The first Midwives Act became law in 1902 after the unsuccessful introduction into the House of Commons of many Bills. The principal Act was followed by amending Acts in 1918, 1926, 1936 and 1950, and finally by a consolidating Act in 1951. Our main interest is the 1951 Act which we shall shortly consider together with the National Health Service Act, 1946. The earlier enactments are now of historic interest only. They are, so to speak, milestones which mark the progressive advancement of the midwives' profession and an increasing awareness of the need for good maternity services.

The Midwives Act, 1902, set the stage by establishing a Central Authority (the Central Midwives' Board) for regulating the profession of midwifery and midwifery practice. The Act made County Councils and County Borough Councils the Local Supervisory Authorities for supervising midwifery practice in their areas in accordance with Rules made by the Board. It also restricted the practice of midwifery by uncertified women and the use by them of the title "midwife". Thus, the first Midwives Act required the statutory registration of midwives and took steps to protect the public against uncertified practitioners.

The Midwives Act, 1918, is noteworthy as the instrument which introduced the so-called medical aid procedure. In effect, it required a midwife to call to her assistance a registered medical practitioner in case of emergency as defined by the rules and to report that she had done so to the local supervising authority. The local supervising authority was required to pay to the practitioner upon receipt of his claim a fee according to a scale fixed by the Ministry of Health. The local supervising authority was empowered to recover the fee in whole or in part from the patient or her husband, a provision later repealed by the National Health Service Act, 1946. The principle upon which the medical aid procedure was based is an important one. It is a principle which has subsequently been extended widely, namely that no person shall go without necessary medical attention for lack of financial means.

The Midwives Act, 1936, should be remembered as the Act which established a whole-time salaried midwifery service for the care of women in their homes. The Act required local supervising authorities to secure the employment of sufficient whole-time midwives to meet the needs of their area. This they could do either by employing midwives directly or by making arrangements with voluntary organisations or welfare councils. The Act also provided for the compensation by local supervising authorities of midwives who elected to cease practice

because they did not wish to enter or could not secure entry to the newly established salaried service.

To summarise, the Midwives Act, 1902, created the professional midwife by examination; the amending Act of 1918 introduced the medical aid procedure; the Act of 1936 established a whole-time salaried service of domiciliary midwives. Before proceeding to consider the Act of 1951, it remains to examine the effects on maternity services of the National Health Service Act, 1946.

The National Health Service Act, 1946, though relating to a far wider range of medical care services, contained many provisions which transformed midwifery services in important ways. The following changes introduced by the Act are especially noteworthy.

- (1) Part II of the Act, as we have seen (Chapter III), transferred all hospitals and specialist services to the Minister, so that public institutional midwifery is now provided through Hospital Boards. One effect of this transfer was to separate the administration of institutional and domiciliary midwifery services, which before July 5th, 1948, were administered in some areas by the same local authority.
- (2) Part III of the Act (S.23) requires every local health authority to secure, whether by making arrangements with Boards of Governors of teaching hospitals, Hospital Management Committees or voluntary organisations for the employment by them of midwives, or by themselves employing midwives, that sufficient midwives are employed for attendance on women in their homes as midwives or as maternity nurses to meet the needs of the area. This provision supersedes the provisions of the Midwives Act, 1936, and differs in that the midwives employed may be either part-time or full-time officers.
- (3) Part IV of the Act secures the establishment of a general medical service which includes the service of the family doctor in connection with pregnancy and confinement. Every woman is entitled to book both a doctor and a midwife for her confinement. A doctor so booked is required to undertake ante-natal examinations and a post-natal examination in addition to being in attendance at the confinement if the midwife requests him to attend or if the doctor himself thinks it necessary to attend. For this service the doctor is paid a fee by the local Executive Council.
- (4) Like other services under the Act, the maternity service is now free. Particularly, the Act repealed sections of the Midwives Acts empowering local supervising authorities to recover medical aid fees from patients. The medical practitioner summoned by a midwife is paid by the Local Supervising Authority as he was before, but the fee is no longer recoverable from the patient.

The Midwives Act, 1951

In the review of the Act which follows there is no pretence of legal exactitude or completeness. Certain passages from the Act are quoted when it appears useful to do so, but generally speaking the aim is to convey only the general purport of its main provisions. It is neither desirable nor necessary for readers to burden themselves with the details of statute Law. Acts of Parliament are meant for reference, not for committal to memory. The main thing is to know what important Acts contain, and therefore to know where to look for information when it is required. The main provisions of the Midwives Act, 1951, are as follows:

CENTRAL MIDWIVES BOARD—CONSTITUTION AND FUNCTIONS

The Act confirms that there shall be a Board known as the Central Midwives Board, consisting of 17 persons* appointed as follows:

- (a) six persons of whom two shall be certified midwives and one a general practitioner, to be appointed by the Minister of Health;
- (b) four, being duly qualified medical practitioners, as to one each, by the Royal College of Physicians, the Royal College of Surgeons, the Royal College of Obstetricians and Gynæcologists and the Society of Medical Officers of Health;
- (c) four certified midwives to be appointed by the Royal College of Midwives; and
- (d) two persons, not being midwives, to be appointed by the County Councils Association and the Association of Municipal Corporations.
- (e) An additional medical member appointed by the Minister of Health.

Powers and duties of the Board are:

- (a) To keep a roll of certified midwives; to remove from, and in certain instances restore to the roll, the name of a certified midwife who disobeys any of the rules of the Board or who otherwise misconducts herself;
- (b) to make rules†:
 - (i) regulating the issue by them of certificates and the conditions of admission to the roll, and prescribing the courses of training to be undergone and the examinations to be passed by women as a condition of the issue of certificates to them;
 - (ii) regulating, supervising and restricting within due limits the practice of certified midwives;
 - (iii) prescribing the conditions under which certified midwives may be suspended from practice and in particular, but without prejudice to the generality of this paragraph, authorising the Board to suspend a certified midwife from practice for such period as they think fit in lieu of removing

* As amended by Statutory Instrument, April 1952.

† See Appendix IX.

her name from the roll and to suspend from practice, until the case has been decided and (in the case of an appeal) until the appeal has been decided, a certified midwife accused before the Board of disobeying rules or of other misconduct;

- (iv) requiring certified midwives to attend from time to time, in accordance with the provisions of the rules, a course of instruction approved by the Board;
- (v) regulating the grant by the Board of diplomas, being diplomas in the teaching of midwifery, to certified midwives presenting themselves for examination for such diplomas; and
- (vi) making provision with respect to the uniform which may be worn by certified midwives and as to the wearing of badges by them.

LOCAL SUPERVISING AUTHORITIES

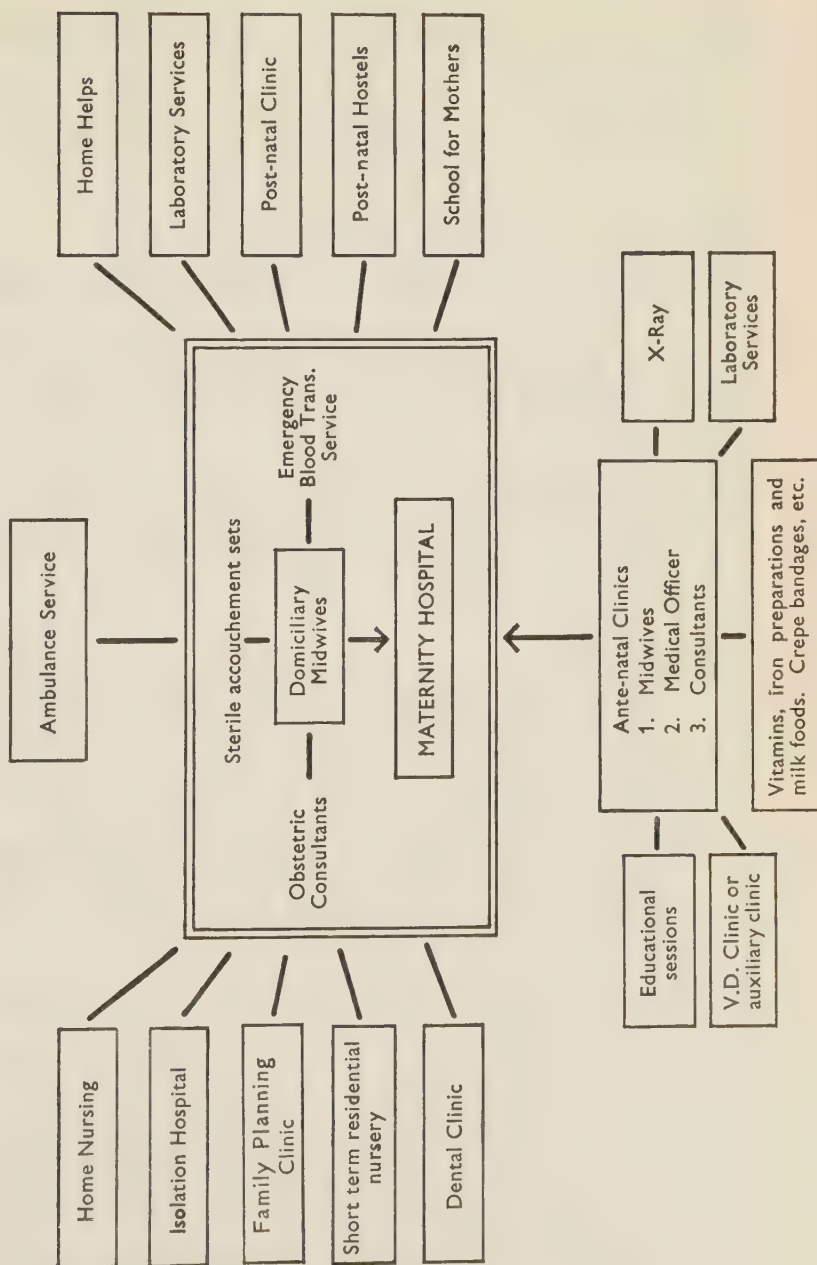
The Act designates Local Health Authorities throughout England and Wales (*i.e.* County Councils and County Borough Councils) as the local supervising authorities for their areas. The duties of local supervising authorities are:

- (a) to exercise general supervision over all certified midwives practising within their area;
- (b) to investigate any charge of malpractice, negligence or misconduct on the part of a certified midwife practising within their area and, if a *prima facie* case is established, to report it to the Board;
- (c) in certain circumstances, to suspend a certified midwife from practice if it appears necessary to do so in order to prevent the spread of infection;
- (d) to report at once to the Board the name of a certified midwife practising within their area who is convicted of an offence;
- (e) to supply the secretary of the Board, during the month of February in each year, with the names and addresses of all certified midwives who, during the period of twelve months ending with the thirty-first day of January in that year, have notified the authority of their intention to practise within their area;
- (f) to report at once to the Board the death of a certified midwife or a change in the name or address of a certified midwife in their area; and
- (g) to provide or arrange for the provision of courses of instruction for certified midwives practising in their area.

MEDICAL ASSISTANCE

In the event of an emergency a certified midwife shall call to her assistance a duly qualified medical practitioner and shall at once report

Fig. 6. ELEMENTS OF A MATERNITY SERVICE



to the local supervising authority that she has done so. The expression "emergency" in this connection means an emergency as defined by the rules of the Board.

The medical practitioner called in by a certified midwife to render assistance submits a claim to the local supervising authority stating the nature of the services he has rendered, and is then entitled to be paid a fee by the authority in accordance with a prescribed scale.

PROHIBITIONS RELATING TO UNQUALIFIED PERSONS

A penalty is imposed for using illegally the name or title of "midwife" or illegally wearing a uniform or badge implying that the wearer is a certified midwife.

Unqualified persons (*i.e.*, either male persons or women who are not certified midwives) are prohibited from attending a woman in childbirth otherwise than under the direction and personal supervision of a duly qualified medical practitioner, excepting only sudden or urgent necessity.

Women who are neither State Certified Midwives nor State Registered Nurses in the general part of the Register of Nurses, and male persons, are prohibited from acting as maternity nurses for gain—*i.e.*, acting as nurses on a woman in childbirth or at any time during the 10 days immediately after childbirth.

OTHER PROVISIONS

- (1) Every certified midwife is required to give notice to the local supervising authority of her intention to practise. This must be done when she first commences practice, and thereafter in the month of January every year.
- (2) A certified midwife is required to give notice of change of address to the local supervising authority within 7 days.
- (3) Where a certified midwife has been suspended from practice in order to prevent the spread of infection she is entitled to be compensated for loss of practice by the local supervising authority if she was not herself in default.
- (4) The local supervising authority is required to supply the certified midwife with the forms and certificates she is required to use. No charge is made for them.
- (5) A certified midwife who is in practice as a midwife is exempt from jury service.
- (6) The Board may in certain circumstances certify midwives under the Midwives Act, 1951, who are already midwives certified in Scotland or Northern Ireland. The Board may also in certain circumstances certify midwives trained outside the United Kingdom.
- (7) Local supervising authorities are empowered to provide residential accommodation for pupil midwives.

The Maternity Services

It should not escape attention that a comprehensive maternity service includes much in addition to obstetric and midwifery services. General health care, the remedy of dental sepsis and chronic nutritional anaemias, for instance, are no less important than obstetric pre-natal care. Sterile accouchement sets add greatly to the convenience and safety of home confinement. Radiography and laboratory procedures are often needed in diagnosis and the control of treatment; a proportion of women need family planning advice on health grounds, and so forth.

It is unnecessary to enumerate all the items comprised by a maternity service. The most important of them are indicated in the accompanying diagram (p. 111). Having made this point we can proceed to consider the obstetric and midwifery services which now exist in Britain.

Midwifery in England and Wales is carried out partly in hospitals and maternity homes (institutional services) and partly in the home of the people (domiciliary services); partly within the National Health Service, and partly by private arrangements. The private sector is now relatively small—of the 816,269 women delivered by midwives in 1962 (when there were 840,000 live births), only some 14,000 were delivered by private midwives (12,584 in institutions and 1,455 at home). In 1964 there were 623,362 confinements in institutions and 267,156 domiciliary confinements. That is to say, some 70 per cent of all confinements took place in institutions, a fact to which we shall return.

MATERNITY INSTITUTIONS

Maternity beds are provided partly in special hospitals and homes and partly in maternity departments of general hospitals.

The modern maternity unit includes in addition to the usual lying-in, first stage and labour wards, specially designed milk kitchens, infant nurseries, smaller nurseries for the care of premature infants, isolation accommodation and treatment beds. Administrative problems connected with the control of infections are greatly simplified if the unit includes a fair proportion of single-bed and small multiple-bed wards, though this arrangement is relatively expensive of staff.

The administrative and technical advantages of a close association between a maternity unit and a large general hospital, with its X-Ray, laboratory and consultant facilities, is beyond dispute. The association of an autonomous maternity unit with a large general hospital is probably ideal, though not always as economical as a maternity department. The maternity department of a general hospital is equally suited to its purpose only if pains are taken to prevent the encroachment of the hospital atmosphere upon normal midwifery. The object is best achieved by placing the nursing administration of the department in the hands of a senior midwife who exercises independent authority over midwifery staff, and by attaching the staff to her department for definite periods. To treat midwifery staff and general nursing staff as interchangeable according to the needs of the hospital as a whole, as is sometimes done, is both uneconomical of midwives and against the best interests of institutional midwifery practice.

The relative safety of institutional confinements is mainly attributable to the conduct of normal labour by midwives, the ready availability of obstetric specialists to deal with abnormalities and the provision of facilities on the spot for blood and plasma transfusions to combat shock and hæmorrhage. Because obstetric emergencies are often unpredictable an hour before the event it is obviously more difficult to provide similar facilities in the woman's home.

It is reckoned that twenty deliveries a year can be undertaken for each lying-in bed (14 days puerperium) assuming that treatment beds are provided on an adequate scale, *i.e.* between a quarter and a third of the lying-in beds.* With the present shorter length of stay for normal cases the annual delivery turnover is nearer thirty—the number of confinements per bed in 1964 was in fact 29.

Confinement in a well-equipped institution has many advantages. The advantages are greatest when obstetric abnormalities are present, and in some circumstances institutional delivery has a margin of safety which cannot be equalled in the home. In any event beds have to be provided in institutions for the treatment of toxæmias, for obstetric emergencies and other maternal conditions, and cots are needed for the care of premature and weakly infants. It is, indeed, apparent that an effective midwifery service must include maternity institutions. Given good communications and transport the institution can, moreover, provide a complete midwifery service for all types of cases and make provision for the treatment of mothers and babies needing special care.

Maternity institutions are not, however, without their dangers. They import a greater risk of spreading maternal and infantile infections than home midwifery, though a high standard of midwifery practice reduces the risk to small proportions. Less obvious, though important, there is also a danger in institutions of introducing an atmosphere more appropriate to the sick ward than to the care of healthy women and babies.

Domiciliary Midwifery

As a consequence of the increase in institutional confinements, the number of home confinements has decreased steadily in recent years. The early discharge of mothers from hospital after confinement, the application of strict criteria to decide whether a woman should be confined in hospital or at home and the transfer to hospital of unbooked emergencies have all contributed to bring about a considerable change in the pattern of domiciliary work.

In 1965, 3,682 whole-time midwives and 3,900 part-time midwives (equivalent to 1,616 whole-time) were employed in the domiciliary service. In the same year, there were 236,782 home confinements under the National Health Service, and 263,061 cases were attended by midwives following early discharge from hospital after confinement. The

* The proportion of treatment beds needed is, of course, greater in areas where the proportion of home confinements is high.

service has accommodated itself to the changed pattern of work by employing part-time midwives and in many areas by the employment of supporting staff of varying grades for non-nursing duties.

It is clear that a domiciliary midwifery service cannot be regarded as an obstetrically, self-sufficient provision. It must be supported by maternity institutions for the confinement of abnormal cases, older primiparae and women over 35 years who are expecting a fifth or later child or where previous obstetric history has not been normal. It is also needed for women requiring treatment which cannot be given in the home and for women whose domestic circumstances are unsuitable for home confinement. There is some difference of opinion about the need for all first confinements to take place in institutions, but a considerable body of informed opinion favours this too.

The domiciliary service also needs the support of general practice obstetricians, obstetric specialists and a blood transfusion service, based for preference on a hospital. A transfusion service for women in their homes has been provided in many places as part of a provision sometimes referred to as a "flying squad".

The officer responsible to the Medical Officer of Health for the supervision of domiciliary midwifery in the area is the Supervisor of Midwives, who may be either a senior midwife or a doctor. In addition to her supervisory duties, she advises the Medical Officer of Health on administrative and technical problems connected with domiciliary midwifery and its relation to institutional services.

The qualifications of the Supervisor of Midwives are prescribed by the Ministry of Health (Statutory Rules and Orders, 1937, No. 389).

For the non-medical supervisor they are in the following terms:

"Any person appointed by an authority on or after the date upon which these regulations come into operation to be a non-medical supervisor shall be a certified midwife whose name is included in the Roll of Midwives required to be kept under the Midwives Acts, 1902-1936, and who (1) is registered in the general part of the Register of Nurses required to be kept under the Nurses Registration Act, 1919, and (2) has been in active practice as a midwife for at least three years subsequent to becoming a certified midwife: provided that (a) at least one year of the said period of three years shall have occurred within a period of two years prior to her first appointment as a non-medical supervisor under the provisions of these regulations and (b) that for at least one year during such period of three years she shall have been attending patients in their own homes."

A Medical Supervisor must have practised for three years, hold a D.P.H., have held a resident appointment in a maternity department for at least six months and have been continually engaged in some branch of obstetric work for at least a year, within two years prior to appointment.

A Ministry circular (1620 [1937]) on the duties of the non-medical supervisor makes the following points:

(1) The practice of employing health visitors with little or no

practical experience of midwifery as non-medical supervisors is to be deprecated.

- (2) The supervisor should be regarded as the counsellor and friend of the midwife rather than a relentless critic.
- (3) The duties of the supervisor of midwives extend to all the midwives practising in the area of the authority.
- (4) It is not desirable for a supervisor of midwives to be engaged in the actual practice of midwifery.
- (5) A distinction should be drawn between the officer holding the post of supervisor of midwives and one who is appointed as a Superintendent or a Senior Midwife to control the work of the salaried midwives appointed by the authority.

Ante-natal Clinics

Ante-natal clinic sessions in England and Wales are conducted by maternity institutions, by Local Authorities, General Practitioners and a few by Voluntary Agencies. An increasing volume of local authority ante-natal care is undertaken in purpose-built premises which are also used for post-natal care, child welfare and other medical care purposes. They are usually staffed by assistant medical officers and midwives employed by the Authority, sometimes supported by part-time specialists. In some areas, a considerable proportion of the ante-natal work formerly undertaken by whole-time assistant medical officers is now done by general practitioners employed on a sessional basis. Out of a total of some 3,000 local authority ante-natal sessions almost half are now undertaken by general practitioners at a sessional fee. More than 100 general practitioners hold special ante-natal sessions in their own surgeries, often with a midwife in attendance.

At the present time, only a small proportion of pregnant women have no pre-natal care (less than 1 per cent). Nineteen out of twenty make five or more visits to ante-natal clinics. In 1965, 275,104 women attended clinics of the Maternal and Child Welfare Service.

Although a great deal of pre-natal care and supervision is within the province of the midwife, only a small minority of women now receive their pre-natal care exclusively from her. The great majority are seen also by a doctor who should be responsible for the general medical care of the pregnant woman and for two or more complete obstetric examinations, the attendant midwife working under his general direction.

A woman should be seen at her first visit by a medical officer and again at the 36th week of pregnancy or thereabouts. At intermediate visits she will usually be seen by the doctor only when she needs general medical advice or when the midwife suspects an abnormality. Intermediate visits at four-weekly intervals up to the 28th week, and thereafter at more frequent intervals, subserve two main functions. They enable the midwife to record body weight and blood pressure and examine the urine, and they afford a valuable opportunity for the midwife to advise the mother about details of personal hygiene.

In addition to obstetric supervision, a blood examination (for a

Wassermann test, hæmoglobin estimation, and blood grouping) is usually undertaken as a routine.

The educational side of ante-natal work is of great importance and is an aspect difficult to satisfy without team work in clinic premises. It includes advice about general health, rest, diet, sleep and comfort. The local authority clinic should be closely associated with one or more maternity institutions. Unless ante-natal clinics have access to treatment beds and a wide range of other maternal-care services much of their potential value is lost.

The Profession of Midwifery

The profession of midwifery shares with the function of child-bearing the distinction of being restricted to women; the one by law, the other by nature.

In 1966, the number of midwives on the Roll of the Central Midwives Board was 69,425 whilst the number of practising midwives was 19,913. Thus there are three times as many members of the profession as there are active practitioners.

Some 14 per cent of practising midwives are State Certified Midwives only, *i.e.* some 86 per cent are also either general or sick children's nurses.

Most midwives are now salaried officers of local health authorities, voluntary associations and hospital boards. A relatively small number practise independently either as domiciliary midwives or in private nursing homes.

As we have seen, over half the practising midwives are now (1962) engaged in institutional midwifery in the National Health Service (8,674 compared with 7,424 in local authority domiciliary practice) and only some 700 remain in private practice. Recalling that rather more than half the midwives in the domiciliary service are part-time, the earlier preponderance of domiciliary practitioners has been reversed. Effectively, one third of the practising midwives are now employed in the domiciliary field and two thirds in maternity institutions.

Notwithstanding this transformation, the more efficient organisation of obstetric services and the now almost universal partnership of doctor and midwife in the obstetric team, midwifery in England and Wales remains the distinctive profession it was proclaimed to be during the planning and inauguration period of the National Health Service. To quote from two Reports of the time:

"MIDWIFERY IS IN FACT A DISTINCT PROFESSION WITH ITS OWN TRADITIONS. The midwife is authorised by law to care for the pregnant woman and to remain in charge of her during labour and the lying-in period, subject only to the obligation to call in a medical practitioner to deal with abnormalities and disease. In the main her patients are healthy women discharging a normal physiological function, and THE MIDWIFE IS LEFT TO HER OWN KNOWLEDGE AND SKILL to attend them." (Rushcliffe Committee Report, 1943.)

"It seems to us that the assets and liabilities of doctor and midwife are complementary and that the arrangement under the new health

service, with the two working in partnership, may prove a good one. It will only be successful, however, if both parties recognise their partnership. The doctor must accept the midwife as his fellow practitioner and not attempt either to relegate her to the status of his handmaiden or to displace her unnecessarily from her position of authority in the patient's eyes. The midwife for her part must not be over-possessive about 'her' patients and must be ready and willing to summon the doctor whenever abnormality, pending or overt, requires his skill. . . .

"What then is the proper duty of a midwife? She should be a practitioner of normal midwifery: the expert in normal child-bearing in all its varied aspects. The doctor is her partner in the detection and treatment of abnormalities, the health visitor in public health and health education and in the rearing of the child whose immediate post-natal existence she has seen firmly established." (Report of the Working Party on Midwives, 1949.)

The partnership between doctor and midwife in domiciliary practice and the fact that three quarters of hospital deliveries are conducted by midwives with no medical practitioner present at the birth are evidence that the principles enunciated 20 years earlier have been widely implemented.

Recent Changes in the Pattern of Maternity Services

Since the National Health Service came into being in 1948 there have been many revisions of the maternity services and many recommendations have been made about the form they should progressively assume. Four issues relating to the organisational aspects of the service in post-war years are prominent:

- (1) The indications for hospital confinement and the number of obstetric beds to be provided.
- (2) The related question of the length of stay in hospital after normal delivery.
- (3) The place of the general practitioner in the obstetric team.
- (4) The provisions needed to ensure continuity and completeness of care throughout pregnancy, childbirth and the puerperium.

On some of these issues there is now a wide measure of agreement, and where differences of opinion still exist they are in many instances being narrowed or erased by developments which have already taken place.

For instance, a Committee appointed in 1956* to enquire into the Maternity Services recommended that general practitioner obstetricians should have access to general practitioner maternity beds and should ultimately replace local authority medical officers in local authority ante-natal clinics. As we have seen, a policy consistent with these recommendations has been successfully pursued in many areas during

* Report of the Maternity Services Emergency Informal Committee, The National Birthday Trust Fund, 57 Lower Belgrave Street, S.W.1. Price 2s. 6d

the last few years and will doubtless be maintained. The Committee's recommendation that sufficient hospital beds should be provided to cover 70 per cent of all confinements now describes an accomplished fact in many areas and on average for the country as a whole; and the selection of women for hospital confinement on the basis of "at risk" criteria has reduced, though not yet abolished, emergency admissions in late pregnancy and labour. The criteria, which are now generally agreed are referred to in Ch. X, p. 177, and local maternity liaison committees which advise on their application and on the co-ordination of different parts of the service have already been mentioned.

Reference has already been made also to the growth of institutional midwifery in recent years, but it is worthwhile to examine at somewhat greater length how this increase has come about, and to consider the closely related question of stay in hospital after normal delivery.

The Growth of Institutional Midwifery and Duration of Stay

In 1927, only 15 per cent of deliveries took place in institutions. Ten years later, the proportion had increased to 35 per cent, and by 1964 to some 70 per cent. The present average for England and Wales is already exceeded in some urban areas where accommodation is sufficient for women to exercise a free choice, and in the large cities of some other countries—notably in the United States and Sweden—the figure approaches 100 per cent (New York City, for instance, 98 per cent). There is good reason to suppose on the available facts that the growth of institutional midwifery will continue in England and Wales, though it is also apparent that there will be a substantial amount of domiciliary midwifery for some time to come.

A part of the increased demand for confinement in hospital has undoubtedly been dictated by obstetrical considerations. It must be remembered that 40 per cent of all births are first births and a proportion of the remainder are abnormal or otherwise at special risk—and there is general agreement that these groups are often best provided for in an institution. There is little doubt, however, that the increase has been mainly due to social rather than obstetric causes.

So long as the social habits of the community kept families together, usually in the same place for a generation or two, so long as the supply of houses did not lag greatly behind demand, home confinement was not a domestic inconvenience. The young mother in pre-war days could generally count on having her husband beside her during the child-bearing years. She could almost always call on her own mother or a near female relative to give a hand in the home during her confinement and puerperium. It was usual for the young married couple to occupy a house of their own. It was usual for the whole family to move when changed industrial conditions required them to do so.

All this has changed. Young industrial workers, who constitute the bulk of the child-bearing population, move freely according to industrial demands. Young married couples are often a long way from the rest of

their family, husband and wife are not infrequently separated for long periods, families sometimes have to share houses, domestic help is difficult to obtain, and there are not enough houses to go round.

The College of Obstetricians and Gynaecologists has advocated "that the ultimate aim should be to provide obstetric beds for all women who need or will accept institutional confinement". They base this recommendation on the fact that institutional confinement provides the maximum safety for mother and child. On the other hand, eminent individual obstetricians and gynaecologists consider that it is sufficient to make institutional provision for cases requiring beds on medical or social grounds.

The difference between these opinions in present circumstances is perhaps less than might appear and will become even narrower in the not distant future.

The number of confinements which can take place in maternity institutions clearly depends on the number of lying-in beds provided and the average length of patient stay. The growth of institutional midwifery in England and Wales has been possible partly by an increased provision of maternity beds and partly by the shorter period of stay after normal confinement which has now become an accepted practice. During the period 1955-1965 the average total length of stay (ante-natal and post-natal beds) in consultant units fell from 12.1 to 8.6 days and in general practitioner units from 11.1 to 7.6 days. Most of the reduction is attributable to a shorter average stay after delivery. There is considerable variation from one Hospital Region to another and between under-graduate teaching and non-teaching hospitals, but it is significant that 43.9 per cent of all women confined in National Health Service hospitals in 1965 were discharged on or before the 7th day. 8.2 per cent of booked cases and 36.9 per cent of women not booked for hospital confinement were discharged within 48 hours of delivery. Such are the facts; and there is now an informed body of opinion in favour of early discharge.

In one view, policy decisions on the early discharge system now in operation should be taken solely on medical and socio-medical grounds and should therefore be divorced from the question of speeding the turnover of cases because of the present shortage of beds.

An informal committee convened by The National Birthday Trust Fund* recently recommended (October, 1963) that a policy of planned 48-hour discharge of suitable cases should be adopted in all areas in which the present shortage of beds makes a quicker turnover of cases in hospitals inevitable if "high risk" cases and ante-natal cases requiring hospital care are adequately provided for. The Committee goes on to comment that "the medical risks of 48-hour discharge are, in most cases, much less serious than those of non-admission". The committee also emphasises that the adoption of an early discharge system should be accompanied by the provision of sufficient help in the home after

* *Report of the Maternity Services Emergency Informal Committee*, The National Birthday Trust Fund, 57 Lower Belgrave Street, London, S.W.1. Price 2s. 6d.

the mother's return, and that it would be especially necessary to protect the hospital midwife from excessive overwork and stress if the hospital turnover was substantially increased.

Reporting on a scheme for early discharge from hospital after child-birth, the City Medical Officer of Bradford concludes (on a review of the first 2,573 cases) that there had been no greater risk either to mother or baby than for home deliveries. This conclusion is consistent with comparable experience in New York and elsewhere.

It is pointed out that the scheme has many advantages including the following:

- (1) It enables existing maternity beds to be used to the best advantages.
- (2) It enables breast-feeding to be established in one environment.
- (3) It enables the services of trained midwives on a part-time basis to be used in home care, *i.e.* midwives who would otherwise be unlikely to be able to accept gainful employment in the services.

Another type of scheme which has been canvassed envisages a block of labour wards attached to a maternity hospital to which the mother would be admitted for delivery, attended by her own doctor and midwife. After normal delivery and recovery from the effects of labour, mother and baby would be taken home by ambulance, accompanied by the midwife, and nursing then continued in the home. The advantages claimed for this scheme are:

- (1) The delivery would be conducted under ideal conditions. If any complications should develop, the resources of the maternity hospital would be readily available.
- (2) The mother would be attended at her delivery by her own doctor and midwife.
- (3) The risk of exposure of mother and baby to hospital cross-infection would be greatly reduced.

A practice which has been much discussed is a planned 48-hour discharge of suitable cases, but even shorter periods of hospital stay have also been considered and recommended for extended trials.

Though present practice will doubtless be modified according to circumstances and in the light of further experience, early discharge after normal delivery has come to stay. It is a particular instance of the general adoption of early ambulation and a shorter in-patient stay which is now a feature of hospital in-patient care.

CHAPTER IX

THE PREVENTION AND CONTROL OF
COMMUNICABLE DISEASES

The Communicable Diseases are diseases due to specific infectious agents which are transmitted, either directly or indirectly, from one person to another, or in some instances transmitted to man from animals, plants, soil or other non-living organic matter. Examples of these diseases are: the common infectious fevers such as diphtheria, scarlet fever, whooping cough, measles, smallpox and chickenpox, which are due to bacteria or viruses; malaria and other diseases due to protozoa; ringworm and other skin diseases due to fungi; and a great variety of somewhat ill-defined conditions such as the common cold and non-specific venereal diseases.

Many infectious diseases have to be notified to health authorities (see p. 126) and are referred to as the notifiable infectious diseases.

In Britain, most communicable diseases are caused by bacteria and viruses and only a few by protozoa, fungi, worms and insects. Most of the infections of special interest to the midwife are bacterial in origin.

When an infectious agent enters and multiplies in the body of a man, he is said to be infected. Infection is not, however, invariably followed by the development of an infectious disease. Sometimes the infection remains latent or without clinical manifestations, and is only identified by laboratory procedures.

A person who harbours a micro-organism for a period of time, either without having had a clinical disease or after recovery from an infectious disease, is said to be a carrier. Carriers are important reservoirs of infection of many common diseases including notably diphtheria, typhoid fever and staphylococcal and streptococcal diseases. A person who becomes a carrier after recovery from an infectious disease is known as a convalescent carrier. A person who is a carrier only from time to time is spoken of as an intermittent carrier. All types of carrier may be sources of new cases of clinical disease.

It is clear from what has been said that although the infectious agent is commonly said to be the cause of an infectious disease, there are other factors which also help to determine the issue. As we have seen, the implantation of pathogenic organisms in the throat, intestine or genital tract, for instance, is not always followed by clinical disease. The infected person's state, or resistance, as well as the infectious agent, is a relevant factor.

When disease results from infection by a particular pathogenic agent the sufferer is said to have been susceptible or lacking sufficient resistance to the pathogen in question. The person who does not develop disease after exposure to a specific infectious agent, on the other hand, is said to be resistant. When the resistance is attributable

to the possession of specific protective antibodies or cellular immunity the person is said to be immune.

Specific immunity may be either inborn—for instance the immunity of the infant to measles, or acquired after birth either by previous infection or immunisation. Immunity which is inborn or acquired by previous infection is said to be natural immunity. The immunity conferred by an attack of scarlet fever or measles is of this nature. In some diseases the immunity thus conferred is life-long; in others it lasts only for weeks or months.

Immunity conferred by immunisation against (for instance) smallpox, diphtheria, tuberculosis and poliomyelitis is spoken of as artificial immunity because of the way it is acquired. A note on the active immunisation procedures now in general use in Britain is given later (p. 153). By active immunisation is meant immunisation by the inoculation of killed or modified organisms or their products. This distinguishes active immunity from passive immunity which is conferred by the inoculation of convalescent or immune serum—or naturally, by transfer from mother to child, as in measles. Passive immunity is of short duration.

In addition to the resistance conferred by specific immunity, the body has many mechanisms which enable it to resist infections, *i.e.* general resistance. Healthy, well-nourished individuals resist *some* infections better than weakly, ill-nourished persons. In particular, the outcome of many infections in infancy depends to a considerable extent on the nutritional state of the infant, as for example in measles and the infectious diarrhoeas. It is also generally true that people who are well-housed and who are not subject to gross overcrowding and poor ventilation, whether at home or at work, are less likely to be critically exposed to many of the common infections.

The number of days between the infection of a susceptible person and the development of clinical disease is called the incubation period.

Examples of incubation periods are:

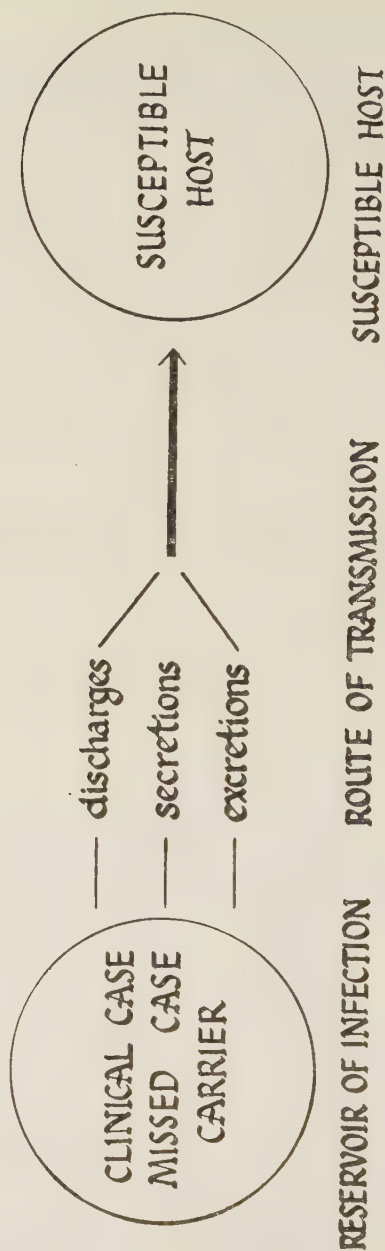
- measles—about 10 days
- scarlet fever—2 to 5 days
- poliomyelitis—commonly 7 to 14 days
- rubella—14 to 21 days
- syphilis—usually about 3 weeks
- diphtheria—2 to 5 days
- streptococcal puerperal fever—1 to 3 days
- gonorrhoea—usually 36 to 48 hours

METHODS OF CONTROL

The occurrence of a case of transmissible disease implies a situation in which three elements are represented. These are:

- (1) A reservoir of infection;
- (2) A susceptible host;
- (3) A mechanism by which the infectious agent is conveyed from reservoir to host.

Fig. 7.—DIAGRAM TO ILLUSTRATE THE SPREAD OF TRANSMISSIBLE DISEASES



The ways in which infectious agents are transmitted, referred to as modes of transmission, are:

- (1) By contact;
- (2) By means of a vehicle such as water, milk and other foodstuffs;
- (3) By means of airborne dust or droplet nuclei (small suspended particles which result from the evaporation of droplets ejected during sneezing, coughing, etc.);
- (4) By means of vectors, *e.g.* insects and other arthropods.

Transmission by insect and other invertebrate vectors, for example, the transmission of malaria and filariasis by mosquitos, typhus fever by the louse, or plague by the flea, is now relatively unimportant in Britain and similar countries. A possible exception is transmission of some gastro-intestinal infections by the common fly.

In the present context, contact includes not only direct contact of skin to skin or mucous membrane to mucous membrane as in kissing or sexual intercourse, but also indirect contact by touching contaminated objects such as soiled clothing, bedding and surgical instruments and dressings. Included also under this heading is spray infection from a nearby infected person during sneezing, coughing or talking. For this kind of infection to occur the persons involved have to be within two or three feet of each other.

Examples of diseases transmitted by contact are the venereal diseases, impetigo, pemphigus and many respiratory infections.

Droplet and airborne infections are pre-eminently infections of the respiratory tract, including many of the common infections of childhood such as acute tonsillitis, the common cold, scarlet fever, whooping cough, measles and chickenpox. It is particularly important in relation to maternity work to keep in mind that the haemolytic streptococcus is often the causal organism of tonsillitis, scarlet fever and erysipelas, and is also often associated with colds and septic skin lesions. Nasal and pharyngeal carriers of streptococci are not uncommon.

Examples of diseases in which the infectious agent is introduced into the gastro-intestinal tract of the host by means of contaminated water, milk or other foodstuffs are:

- (1) By water—typhoid fever and cholera;
- (2) By milk—infantile diarrhoea, typhoid fever, bovine tuberculosis;
- (3) By food—typhoid and paratyphoid fevers, and bacterial food-poisoning.

The chain of events is sometimes complex, but essentially it always involves, directly or indirectly, the contamination with dejecta or secretions from an infected person of food, water or other things or substances which are later introduced into the mouth of the susceptible host.

Measures for the prevention of the communicable diseases are related in some instances mainly to the reservoir of infection, in some instances to breaking the chain of transmission from reservoir to host, and in yet other instances to the specific protection of susceptible persons. In

practice, the prevention and control of infectious diseases often depends on a combination of all three elements. Preventive measures include therefore:

- (1) The control of reservoirs of infection by such means as the isolation of patients, the surveillance of contacts, the control of carriers, and the disinfection of contaminated clothing, bedding etc.;
- (2) The control of vehicles of transmission, as for example the chlorination of water supplies, the pasteurisation of milk and the sanitary supervision of food production and food handling.
- (3) The protection of susceptibles by immunisation, or in certain circumstances in hospitals and other residential institutions, by chemoprophylaxis or passive immunisation.

The deployment of the special measures needed to control outbreaks or epidemics of communicable diseases is an important function of public health administrations. In Table 2 (p. 130) examples of preventive measures for individual communicable diseases are given.

We conclude by stressing once more that the most important reservoirs of infection for most diseases of temperate climates are human sufferers or carriers. Their isolation or segregation is especially important in the prevention and control of infections in hospitals and other institutions.

Notification of Infectious Diseases

Whether a disease shall be notifiable is a matter determined by law, based as a rule on current medical knowledge and practice. Infectious diseases may be made notifiable by statute, by regulation, or by resolution of a local authority with the consent of the Ministry of Health; and most, though not every serious infectious disease is notifiable under one or other of these provisions. Thus, for instance, many common infectious diseases, including diphtheria, scarlet fever, enteric fever, cholera and smallpox, were made notifiable by the Public Health Act, 1936. Measles and whooping cough, on the other hand, were made notifiable by regulations in 1939, and ophthalmia neonatorum by the Public Health (Ophthalmia Neonatorum) Regulations, 1926.

According to law, the onus of notifying an infectious disease is placed as a rule not only on persons in professional attendance on a patient but also on heads of families and near relatives. But in practice it is exceptional for anyone other than a medical practitioner to notify.

Generally speaking then, notifications are made:

BY—A Medical Practitioner.

TO—The Medical Officer of Health for the County District or the County Borough in which the case occurs.

Ophthalmia neonatorum is an exception; notifications of this condition are made to the Medical Officer of Health of the appropriate Local Health Authority—*i.e.*, a County Borough Council or a County Council as the case may be.

In the case of notifications of other diseases made to the Medical

Officer of Health of the County District, the District M.O.H. is required to send a copy of the notification to the appropriate County M.O.H., within 12 hours after its receipt if possible, and in any case within 48 hours (Ministry of Health circular 26/50). A local authority is required to provide forms of certificate for the use of practitioners in their district and a fee is payable to the practitioner for every notification made. Payments for notifications made by a District Council to medical practitioners are recoverable by the District Council from the County Council.

NOTIFICATION OF FOOD POISONING

Under the Food and Drugs Act, 1938 (Section 17), medical practitioners are required to notify food poisoning to the appropriate local M.O.H. Food poisoning is not defined in the Act, but the Minister has suggested that notifications need not include cases in which food causes an infectious disease which is otherwise statutorily notifiable as such (Ministry of Health circular 46/49). The M.O.H. is able to get advice or help in connection with outbreaks of food poisoning—or infectious diseases generally—from the Ministry of Health or from one of the Laboratories of the Public Health Laboratory Service.

NOTIFICATION OF PUERPERAL PYREXIA

The Puerperal Pyrexia Regulations, 1951, require every medical practitioner to notify in approved form the occurrence of puerperal pyrexia to the local M.O.H.

The regulations define PUERPERAL PYREXIA AS ANY FEBRILE CONDITIONS OCCURRING IN A WOMAN IN WHOM A TEMPERATURE OF 100·4 DEG. F. (38 DEG. C.) OR MORE HAS OCCURRED WITHIN 14 DAYS AFTER CHILD-BIRTH OR MISCARRIAGE.

The form of Certificate, as prescribed in the Puerperal Pyrexia Amendment Regulations, 1954, which is completed by the notifying Medical Practitioner, is reproduced on page 129.

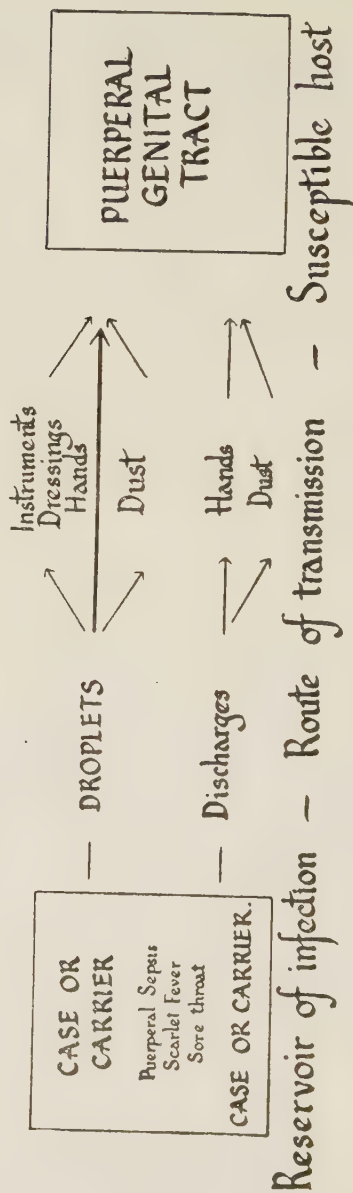
It will be noticed that puerperal pyrexia refers only to a pyrexial state without regard to the underlying causes. Thus, for instance, an inter-current mastitis, cold or influenza, are all notifiable as puerperal pyrexia provided that they are associated with a rise of temperature according to the definition.

Notification is intended to be the starting point of further enquiries, and the local M.O.H. is responsible for investigating the origin and cause of outbreaks. In County areas, it is the duty of a district M.O.H., on receiving a certification of notification, to send a copy within 12 hours if possible, and in any case within 48 hours, to the County M.O.H., as for infectious diseases generally.

Cross Infection

The term "cross infection" is used to mean the acquisition by a patient of an infection whilst in hospital. It includes non-specific as well as specific infections and non-notifiable as well as notifiable conditions. The term covers, therefore, such conditions as puerperal

Fig. 8.—DIAGRAM TO ILLUSTRATE THE SPREAD OF PUERPERAL SEPSIS
CAUSED BY HAEMOLYTIC STREPTOCOCCI



Certificate of
NOTIFICATION OF PUERPERAL PYREXIA

To the Medical Officer of Health

I hereby certify and declare that in my opinion.....

..... * now at.....

..... † is suffering from puerperal pyrexia.

Age of patient.....

Date of confinement or miscarriage..... 19.....

Date of onset of disease..... 19.....

Cause, if known.....

If the patient is an inmate of a hospital, the place from which
the patient was brought to the hospital.....

Date on which patient was so brought..... 19.....

Did the case occur in general practice?.....

If case occurred in practice as medical officer of a public body
or institution, name of the body or institution.....

Signed.....

Address.....

Dated the..... day of..... 19.....

* Insert full name. † Insert full address.

sepsis and breast abscess acquired in hospital by the lying-in woman, and such conditions as enteritis and pemphigus of the newly-born infant.

In infectious diseases hospitals and children's hospitals, the control of cross infection is an over-riding consideration and it is hardly less so in maternity institutions because of the susceptibility of the newly-born infant to gastro-enteritis and skin infections, and of the puerperal woman to infections of the birth canal.

The prevention of infection in hospitals relies mainly on the elimination of sources of infection or the control of routes of transmission according to the general principles already discussed.

The structure and arrangement of the institution influence greatly the hazards of cross infection and must generally be taken as fixed. Equally important, however, is the disposition of cases within the institution and the maintenance of a deliberate and scrupulous technique by an adequate and well-trained staff. Without good ventilation, proper bed spacing, adequate equipment, and isolation accommodation, the highly skilled staff will be hard pressed to avoid

TABLE 2

SOURCES, TRANSMISSION AND PREVENTION OF CERTAIN INFECTIOUS DISEASES

SOURCES OF INFECTIONS	MODE OF TRANSMISSION	MAIN PREVENTIVE MEASURES
<i>Puerperal Haemolytic Streptococcal Infection.</i> Clinical cases of: Sore Throat, Scarlet Fever, Coryza, Influenza, Puerperal Sepsis, Skin Sepsis. Carriers,—naso-pharyngeal and faucial (Attendants, visitors or patient herself). Respiratory tract, intestinal tract, genital tract and skin of patient. (See also diagram on page 128)	Droplets and dust (direct and indirect) Dressings, instruments, etc., Attendants hands Patient's own hands.	Strict asepsis Elimination of sources of infection from the puerperal environment (<i>i.e.</i> attendants, visitors and other patients with respiratory or skin infection. The identification of carriers among midwives, etc. Chemoprophylaxis in patients at special risk.
<i>Infantile Enteritis.</i> (a) Secretions from infection of upper respiratory tract. (b) Urine and faeces from cases of gastro-enteritis or carriers.	Faecal contamination of hands of attendants or mother coupled with poor personal hygiene leading to contamination of feeding bottles, etc. In epidemics, by droplets and dust often causing primary respiratory infections with a secondary enteritis.	Elimination of possible sources of infection from the nursery and kitchen. Individual equipment for infants. Masks. Safe handling of soiled linen. Aseptic milk kitchen technique. Hand toilet. Encouragement of breast feeding. Record of all bottle feeds. Suitable cubicle and nursing arrangements.
<i>Diphtheria.</i> Clinical cases. Carrier. (mainly pharyngeal and nasal).	Droplets and dust. Secretions. Articles soiled with discharges.	Artificial immunisation. General hygiene. Bacteriologically controlled isolation of cases.
<i>Enteric fever.</i> Clinical cases. Carrier.	Water, milk and other foods contaminated directly or indirectly by faeces or urine. Often by hands of a carrier or missed case.	Safe sewage disposal. Sanitary supervision of processing, preparation and serving of food-stuffs. Screening of food against flies. Discovery and supervision of typhoid carriers.

SOURCES OF INFECTIONS	MODE OF TRANSMISSION	MAIN PREVENTIVE MEASURES
<i>Enteric fever. (contd.)</i>		Control of public water supplies including chlorination. Pasteurisation of milk. Hand toilet by food and milk handlers. Artificial immunisation for persons who must live in places where sanitary control is inadequate.
<i>Rubella.</i> Naso-pharyngeal secretions of infected person.	Droplet spread or indirect contact with articles soiled with discharges from nose or throat of patient.	No action to protect healthy children against exposure. Immunisation (glama-globulin) should be considered for female contacts in early pregnancy.

cross infection although they can compensate for many deficiencies by diligence and skill.

A Ministry of Health memorandum on the administrative aspects of cross-infection (Memorandum No. P.M.1) makes the following general recommendations for the control of cross-infection in hospitals:

- (1) Hospital Management Committees and Boards of Governors should set up a Control of Infection Committee with wide staff representation.
- (2) Hospital staff with sore throats and colds, gastro-intestinal disturbances, or septic fingers and suspicious rashes should report these to the appropriate authority.
- (3) Medical and nursing staff should try to educate patients, visitors, etc. and should insist that masks are worn where necessary.
- (4) Hospital staff should be made aware of the danger of carriers.
- (5) Infectious cases should normally be nursed in isolation.
- (6) Patients should not be retained in hospital longer than is necessary.
- (7) Particular attention should be paid to minimising dust-borne infections.
- (8) A weekly statement of all infections in wards should be made to the matron.

Hospital laundry arrangements and staphylococcal infections in hospitals have been the subject of recent Ministry of Health reports.*

* Hospital Laundry Arrangements. Ministry of Health, Central Health Services Council Report. H.M.S.O. 1959. 1s. 3d.
Staphylococcal Infections in Hospitals. Ministry of Health, Central Health Services Council; Report of Sub-Committee of Standing Medical Advisory Committee. H.M.S.O. 1959. 2s. 6d.

In no branch of medicine is the skill of a painstaking attendant of more importance than in midwifery and nowhere is the practice of a careful technique more essential than in a maternity institution.

It should be stressed that the newly-born infant, as well as the puerperal mother, has to be safeguarded from infection. This is especially so in institutional midwifery practice.

Special Problems of Cross Infection in Connection with Midwifery*

The problems of cross infection in midwifery may conveniently be considered under two headings: (a) procedures to minimise the risk of infection and (b) actions to be taken when an infection is suspected or known to have occurred.

Under each heading the risks peculiar to mother and child need separate consideration and methods of control in domiciliary practice differ somewhat from methods appropriate to an institution.

ELEMENTS OF A ROUTINE FOR REDUCING THE RISK OF MATERNAL INFECTION

A. CONTROL OF SOURCES OF INFECTION

(a) Among patients admitted to the institution.

- (1) Every patient should be admitted, in the first instance, to an admitting room for examination and history taking. Admission to an open ward should be conditional upon freedom from conditions which might put other patients at special risk. Where there is any doubt the patient should ideally be admitted to a single-bed ward. If this is impossible, she should be admitted to a ward accommodating only patients in the late puerperium rather than to a ward containing recently delivered women. In either event she should be "barrier nursed" from the outset and this technique should continue until it is clear that a special risk no longer exists.
- (2) No potentially infected case should be admitted to an open maternity ward.
- (3) No pyrexial case should be retained in an open maternity ward.

(b) Among midwives and other attendants.

- (1) Midwives and other attendants with acute colds, sore throats, or skin sepsis should report their conditions promptly. If the associated organism is shown by investigation to be streptococcus hæmolyticus or a staphylococcus they should be suspended from duty until they are no longer a potential danger.

* This section is intended for the guidance of pupil midwives and practising midwives. It may be omitted by other teachers.

- (2) "To preclude future hardship, candidates for training as pupil midwives should be examined clinically, and those suffering from chronic infection of the tonsils or sinuses with hæmolytic streptococci should be advised that a persistent disability of this character is likely to preclude them from engaging in the practice of midwifery."
(Extract from "The Control of Puerperal Sepsis", Memo 226/Med, Ministry of Health, 1939, H.M. Stationery Office.)

(c) Among visitors.

Visiting should be restricted to husbands and near relatives. They should wear masks if they have colds or other infections. Child visitors should in no circumstances be permitted.

B. CONTROL OF ROUTES OF TRANSMISSION

(a) Droplet infection.

- (1) Good ventilation.
- (2) Bed spacing—the distance between bed centres should be not less than 8 feet and the minimum floor area per bed should be 100 square feet. In the case of a single-bed ward the floor area should be 120 square feet.
- (3) Face masks should be worn by staff whilst attending patients.

"It is dangerous to touch the inside* surface of masks, for the fingers will thus become contaminated with pathogenic organisms from the respiratory tract. For the same reason, masks should not be left about the ward, nor carried in the pocket or apron front. They should not be re-worn after having been discarded. Immediately after use, they should be placed in a bowl of diluted liquor chloroxylenolis (1 in 80). At the end of the day the soiled masks should be boiled, rinsed out and ironed. A liberal supply of clean masks should be placed in a conspicuous position in the ward."

(b) Control of dust-borne infection.

- (1) "Bed clothes—blankets and pillows should be handled gently to minimise the scattering of dust particles."
- (2) "Floors—floors of wards and passages, if of wood or covered with linoleum, should be treated with spindle oil."
- (3) "Cleaning duties—nurses . . . nurses should not undertake cleaning duties and ward maids should not undertake nursing duties. Ward maids should wear gowns while cleaning and should remove them and wash their hands and forearms thoroughly before performing other duties."
- (4) "Protection from dust—Sterile materials, sterile instruments, food, milk, etc., should be kept in covered con-

* Or for that matter the outer surface (Author's comment).

tainers to protect them from dust. Crockery, glass, cutlery, etc., should be kept in drawers or cupboards. Plates should be stacked in piles and covered with clean towels after washing up. Any article which falls on the floor should be regarded as infected and should be disinfected, preferably by heat, before being used again. If this is impracticable, it should be thoroughly washed with soap and hot water.”†

(c) Control of indirect infection.

- (1) Hand washing } —Discussed under gastro-intestinal
- (2) Laundry } infections.
- (3) Bed pan sterilisation.
- (4) The aseptic technique as applied to the perineal toilet.

Special points to note are:

- (a) Cleaning and bed making are to cease at least one hour before toilet.
- (b) Windows and doors are to be kept shut during toilet.
- (c) In any ward only one toilet should be undertaken at a time.
- (d) A midwife or pupil who attends to the toilet should be assisted by a midwife or a pupil whose sole duty is to look after the trolley.
- (e) Antibiotic drugs may be used prophylactically in patients likely to be at special risk, *e.g.* after difficult delivery or severe lacerations.

ELEMENTS OF ROUTINE FOR REDUCING THE RISK OF INFANTILE ENTERITIS

A. CONTROL OF SOURCE OF INFECTION

- (1) Sickness: Every member of the hospital staff should be impressed with the duty of reporting minor ailments, and especially attacks of diarrhoea and vomiting. Kitchen and serving personnel should report even minor gastro-intestinal disturbances.

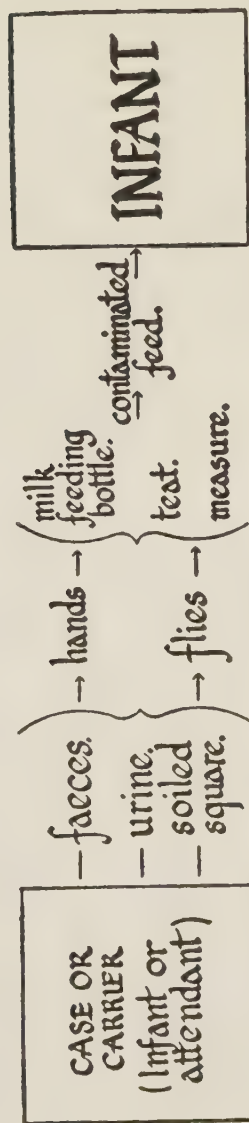
B. CONTROL OF ROUTES OF TRANSMISSION

- (1) Hand washing and personal hygiene: Midwives should wash their hands thoroughly before preparing the bottle feeds and after changing napkins, using the water closet, or engaging in other tasks which might result in contamination of the hands. The hands should be cared for, finger nails should be short and rings, wrist watches or bangles should not be worn on duty.

† The quoted passages are taken from the Medical Research Council War Memorandum No. 11 on “Control of Cross Infection in Hospitals, 1944” (H.M. Stationery Office), 6d., unless otherwise stated. (Revised edition, 1951).

Fig. 9.—DIAGRAM TO ILLUSTRATE THE SPREAD OF GASTRO INTESTINAL INFECTION OF INFANTS

a. Primary gastro-intestinal.



Reservoir of infection — Route of transmission — Susceptible host

- (2) Laundry: "Great care should be taken in the handling of soiled linen." . . . "Soiled linen bags of canvas on wheeled frames are convenient for collecting linen from the bedside. Soiled linen should never be counted or sorted in the ward or its annexes. It should be sent, uncounted, direct to the laundry, and should be received there by responsible sorters. They should be the only persons in the laundry to handle soiled linen before it goes to the wash." "Disinfection before laundering is necessary for linen, gowns, etc., from patients with gastro-intestinal infections and for linen and garments soiled with discharges or excreta". Napkins after removal should be put into an individual bin and should not be handled again in the ward, but should be tipped from the individual bins into a common bin containing diluted "white fluid". "The laundry should have special means of dealing with napkins, *i.e.*, either a special napkin washing machine, in which napkins can be washed without preliminary cleansing, or a special laundress allocated to the scrubbing out of napkins before they are washed. All napkins should be boiled during the washing process."

- (3) Breast feeding: Masks should be worn by nursing mothers with colds or sore throats whilst they are breast feeding the baby and everything possible should be done to establish and maintain breast feeding.

A note should be made on the baby's clinical chart whenever artificial feeds are given and even when small quantities of sterile water are given to the baby.

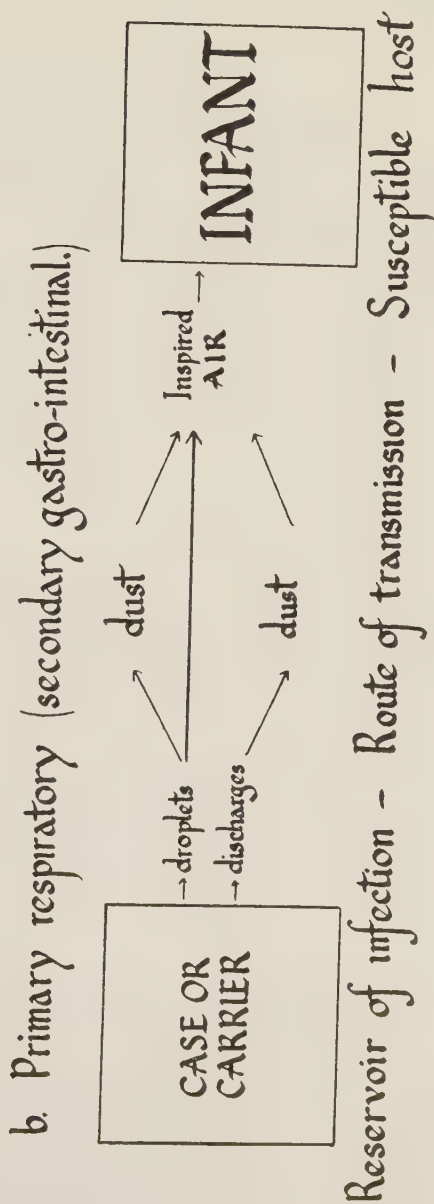
- (4) "Preparation of bottle feeds: Careful precautions are necessary in the preparation and giving of bottle-feeds. It is strongly recommended that nurses who change infants' napkins (or otherwise deal with excreta, or with septic conditions) should not prepare or give bottle-feeds. In whatever way duties are arranged, however, it is of the utmost importance that every nurse should wash her hands thoroughly (*a*) before preparing a feed; (*b*) after changing an infant; (*c*) before giving a feed. Furthermore, she should wear a face mask throughout.

Dried milks should be kept in tins in a special cupboard. Every bottle-fed infant should have an individual bowl, plate and glasscloth, marked with his name and reserved for his use. The bowl, when not in use, should be covered with his plate and it should be washed thoroughly with soap and water containing a little soda before and after each use.

Before giving a feed, the nurse should scald the bowl, place the bottle containing the feed in it, and surround the bottle with warm sterile water (at about 100 deg. F.). She should cover the bowl with the plate until the infant is ready for feeding.

When feeds are finished, the bottles should be washed out

Fig. 10.—DIAGRAM TO ILLUSTRATE THE SPREAD OF GASTRO-INTESTINAL INFECTION OF INFANTS



in running cold water, and the teats and valves turned inside out and gently scrubbed to remove all traces of feed. Bottles, teats, and valves should then be placed in cold water in a special steriliser (as an improvisation a fish kettle over a gas or electric heater will serve); they should be boiled for 2 to 5 minutes, left in the steriliser until required again and then reboiled for 2 to 5 minutes. The full procedure should be followed before and after each feed. Bottle feeds should be prepared by a senior member of the nursing staff. The preservation of rubber teats and valves, when not in current use, is important. They should be kept dry by storage in dry salt in an air-tight container."

- (5) "Milk kitchens.—Some hospitals prefer a central milk kitchen serving the whole hospital; others prefer ward milk kitchens. A central milk kitchen has the advantages of being more economical of staff and equipment, and of a personnel not exposed to ward infections. Should, however, any contamination be introduced, infection may become widespread in the hospital. In ward milk kitchens formulas can be more rapidly changed to suit an infant's requirements, and nurses in training see the direct results of the feeds they have prepared. On the other hand, as the staff is in direct contact with patients, there is greater risk of contamination.

A central, or ward milk kitchen should fulfil certain requirements. It should be reserved solely for the preparation of infant feeds; be situated as far as possible from sluices, water closets, etc., be fly-proof; contain equipment for rinsing, cleaning and sterilising feeding bottles, have running hot and cold water laid on, and be fitted with hand basin, covered containers, racks for feeding bottles, gas or electric cooker, refrigerator, etc. It should be in the regular charge of a sister or staff nurse, who will supervise and teach nurses regarding infant feeds. Staff members should wash their hands thoroughly and don gowns and face masks before starting work. They should be left free from interruption while in the milk kitchen. Unauthorised persons should not be admitted."

GENERAL

- A. An adequate nursing and domestic staff should be provided.

The patient-staff ratio necessary for safe and effective working will vary somewhat from hospital to hospital. A hospital well provided with small or single wards makes a heavier demand on nursing staff than one containing a few large wards. A hospital receiving a high proportion of abnormal cases and making full provision for the treatment of premature infants will similarly require a high proportion of staff to patients. The operation of ante-natal clinics, the teaching of pupil midwives, and the separate staffing of an observation block will also influence the ratio.

As a general guide, the ratio of 1 midwife to 2 or 2½ patients is appropriate; the ratio of 1:2 is generally to be preferred.

- B. The Midwifery Teacher and Midwifery Sister have a great responsibility for teaching and enforcing a sound technique.
- C. The provision of sterilised maternity outfits for use in connection with domiciliary midwifery is valuable.

PROCEDURE FOLLOWING THE OCCURRENCE OF PUERPERAL PYREXIA IN THE MATERNITY WARD

The occurrence of pyrexia is a signal for investigation into the cause. Unless it is certain that the raised temperature is attributable to some condition which does not increase the risk of infection in the ward, the attendant contacts must not conduct a labour or nurse women in the early puerperium. In order to exclude hæmolytic streptococcal infection of the genital tract it will usually be necessary to take a vaginal swab for bacteriological examination. A report will be available in 24 to 36 hours and if the swab yields hæmolytic streptococci, or if there is other evidence of puerperal sepsis, the following steps should be taken:

- (1) The case should be removed to an Isolation Hospital or other isolation accommodation.
- (2) Penicillin is used for the specific treatment of patients with streptococcal infections with the addition of broad spectrum antibiotics in mixed bacterial infections. Infected attendants or carriers should also be treated with penicillin where appropriate and oral penicillin may be given prophylactically to other personnel and patients.
- (3) Patient contacts should continue to be nursed by attendant contacts, who should not undertake the care of other patients until either:
 - (a) The contact patients have been discharged and terminal disinfection carried out.
 - or (b) the responsible officer is satisfied that there is no longer a special danger of infection.
- (4) Contact patients should be barrier nursed and kept under close clinical observation so long as secondary cases may be expected to occur.
- (5) A midwife contact who shows signs of acute or chronic inflammatory conditions of the upper respiratory tract should be suspended from duty until swabs have been examined and it is deemed safe for her to resume duty.
- (6) In order to discover possible sources of infection, swabs should be taken from the nose and throat and from any skin lesions of attendant contacts and from the vagina of any pyrexial patient contacts.

Because of staff deficiencies it is often impracticable to carry out fully the recommendations relating to staff, but in any circumstance

it is especially important that contact attendants should not care for women in labour or attend upon new admissions. Circumstances vary so much that it is impossible to formulate a code of rules which are applicable generally. In general terms, the aim is:

- (a) to remove known sources of infection from the ward;
- (b) to nurse contacts as a separate group; and
- (c) to admit only to "clean" wards.

The organisms which are most commonly the cause of puerperal sepsis are the streptococcus, the staphylococcus and the coliform bacillus. Hæmolytic streptococci Group A (Lancefield) are the most likely to cause puerperal sepsis, but groups B, C and G may also cause dangerous infection. Typing of hæmolytic streptococci is undertaken in connection with the identification of sources of infection and is usually carried out only in larger laboratories. Coliform bacilli or non-hæmolytic streptococci are the usual organisms of infection after trauma, whereas hæmolytic streptococci Group A are as common after normal as after difficult labour.

The staphylococcus is often the organism responsible for breast abscess in the puerperal woman and for skin sepsis in the infant. Since the widespread use of antibiotics, resistant strains of staphylococci have become a serious problem in maternity hospital practice, and indeed in hospitals generally.

Provision is made in the National Health Service for laboratory examinations, consultant services, skilled nursing in the home, and the treatment in isolation hospitals of notified cases.

The midwife will not usually be called upon to decide what safeguards are necessary and what steps shall be taken when a case of puerperal sepsis has occurred; she will be expected to furnish information upon which the responsible medical officer bases his judgment. It is of the utmost value to the medical officer to have an accurate account of all the attendant circumstances and the midwife can assist by preparing information under two main headings, namely:

- (1) A sketch plan of the ward in which the case occurred with a note of the date of admission and the date of delivery of each patient and a note of the bed(s) in which the case(s) occurred with the date of onset.
- (2) A list of attendants who have been associated with the delivery and care of the case and contact patients, and a note of any who have been transferred to other duties since the date of delivery of the first case.

PROCEDURE FOLLOWING THE OCCURRENCE OF GASTRO-ENTERITIS OF THE NEW-BORN IN A MATERNITY INSTITUTION

Epidemic enteritis of the new-born is a relatively uncommon occurrence, but whenever it occurs in a maternity institution, it is a serious matter. It usually has a high case fatality rate, *i.e.*, a high proportion of the babies affected die from it. No time should be lost in impressing upon the nursing staff the seriousness of the occurrence and

applying rigorous safeguards according to the following principles:

- (1) The case, or presumed case, should be isolated and nursed by a separate nursing staff. Transference of the infant, and mother if necessary, to a hospital or block with special facilities for isolation and treatment is best.
- (2) Laundry, milk kitchen and feeding routines should be thoroughly reviewed, and staff reminded about hand-toilet and other precautions.
- (3) The aid of a bacteriologist should be enlisted in the investigation of contacts and sources of infection.

If more than one case occurs, the following additional steps should be taken:

- (1) The whole unit or block should be regarded as at special risk and should be closed to new admissions.
- (2) Healthy infants aged 4 days or more should be discharged with their mothers to their homes, where they will be cared for by a midwife who for the time being is relieved of other duties, or by a district nurse.
- (3) Infants and mothers who remain should be barrier nursed as a group by the contact midwives, and the nursing should be so arranged that midwives who prepare feeds and supervise feeding have no other duties to perform.
- (4) After discharge of the last infant a thorough disinfection should be carried out and the staff allowed a short period of leave.

A modified procedure which is less disturbing may be sufficient in units made up of single-bed or small multiple-bed wards provided that contact attendants have performed duties only in a section or wing of the unit, and a completely separate milk kitchen can be provided for the affected section or wing.

In addition to measures to combat dehydration treatment by sulphadiazine and antibiotics may be useful.

Ophthalmia Neonatorum

OPHTHALMIA NEONATORUM is defined under the Public Health (Ophthalmia Neonatorum) Regulations, 1926, as "a purulent discharge from the eyes of an infant commencing within 21 days from the date of its birth." It is a notifiable infectious disease and the onus of notifying the Medical Officer of Health is placed on the medical practitioner (see p. 126).

A midwife will summon medical aid if there is any inflammation of, or discharge from, the eyes, and send notice to the local supervising authority that she has done so; the doctor will then notify the case if he thinks fit.

The condition may be due to infection either with the gonococcus or with other organisms. Untreated gonorrhœal ophthalmia inflicts serious damage on the eyes and has been responsible in the past for

much juvenile blindness and impaired vision. The infection is usually due to infected discharges from the mother getting into the child's eyes during its passage through the birth canal.

The organism which most commonly causes ophthalmia now is the staphylococcus aureus. The infection is usually dust-borne. Staphylococcal ophthalmia does not usually cause as much permanent damage as gonococcal ophthalmia.

The incidence of ophthalmia is decreasing and impairment of vision from this cause is now rare, mainly because of preventive and remedial measures which have for some time been an established practice. The virtual elimination of blindness from this cause is as instructive an example as may be found of the value of team work in public health and the great benefits which sometimes follow relatively simple procedures.

The main points in prevention are:

- (1) The prevention and early treatment of gonorrhœa.
- (2) The control of staphylococcal (dust-borne) infections.

Formerly, it was the practice to instil silver nitrate drops into the infant's eye shortly after birth, but this practice was abandoned some time ago. In the opinion of some venereologists the recent increase in gonorrhœal infections (see p. 145) may justify a reconsideration of this practice, or some appropriate alternative. For the time being, however, it is recommended, in Britain, that nothing should be put into the eye prophylactically as medical services are highly developed and readily available. This recommendation is based partly on the expectation that gonorrhœa should be diagnosed and treated ante-natally and partly on the fact that any inflammation of the eye should be noticed and treated as soon as it arises. Gonococcal ophthalmia neonatorum usually appears within 48 hours of birth and responds quickly to penicillin. It is thought, moreover, that the effectiveness of eye drops is not beyond doubt and that the danger of chemical ophthalmia cannot be lightly disregarded.

Effective early treatment is secured by:

- (1) Notification.
- (2) The provision of:
 - (a) beds for the reception of the infant and mother whenever the infection is severe;
 - (b) the services of an ophthalmic surgeon;
 - (c) home visiting and nursing for mild cases.

Pemphigus Neonatorum

PEMPHIGUS NEONATORUM is a highly contagious disease of the skin occurring in the new born. It is characterised by the development of blisters which rupture readily, leaving weeping red areas denuded of superficial skin. Healing takes place without scarring. Any part of the skin surface may be involved but the commonest sites are near the nails, on the face and neck, and where two skin surfaces are

in close apposition. Severe forms are known which involve large areas of skin, and may end fatally in a few days. The causal agent is usually the staphylococcus, but the streptococcus also is sometimes responsible. The organisms probably enter through slight abrasions of the infant's skin by contact with the hands and forearms of attendants or infected articles such as soap and towels. The midwife is often the primary source of infection and the cause of spread. The condition spreads easily and is extremely difficult to control both in institutions and district practice. It is a common experience that new cases crop up occasionally for some time after the primary case, even though every reasonable precaution has been taken and a thorough disinfection carried out.

Pemphigus is not a notifiable infectious disease, but the midwife is required to notify the local supervising authority of her liability to be a source of infection if she suspects the occurrence of a case in her practice.

She will also summon medical aid and report that she has done so if an infant in her care develops a serious skin eruption (especially if marked by a formation of one or more watery blisters).

The whole-time salaried midwife would, in addition, probably inform the appropriate senior officer of any suspicious skin condition she met with, so that the Medical Officer of Health might be advised and give directions.

PREVENTION depends on the temporary suspension of midwives with septic skin lesions, impetigo and whitlows and the maintenance of a meticulous nursing technique.

Special measures for the prevention of pemphigus neonatorum and staphylococcal infections in maternity institutions include:

- (i) Rooming-in of infants and cot-isolation.
- (ii) Provision of personal toilet requisites for each baby.
- (iii) Use of disposable napkins and minimal handling of soiled linen.
- (iv) Cot-cleaning only until the fifth day, after a bath at birth.
- (v) Carefully planned toilet care for the mother, including the provision of an individual sterilized package as necessary. Safe disposal of soiled pads, avoidance of swabbing and washing of the vulval and anal areas until the patient is allowed up to bath.

WHEN A CASE HAS OCCURRED the following steps are taken:

(a) IN DISTRICT PRACTICE:

- (i) The midwife is suspended from duty.
- (ii) The case is, if possible, removed to an isolation hospital, or arrangements are made for care by someone other than a practising midwife.
- (iii) Personal cleansing and sterilisation of equipment are undertaken before the midwife resumes practice.

(b) IN AN INSTITUTION:

- (i) The case is removed to an isolation hospital.
- (ii) Contact cases are treated as potentially infective and are nursed as a group by a separate team of midwives employing a strict "barrier" technique.
- (iii) A thorough disinfection of rooms and the sterilisation of clothing, equipment and toilet articles are carried out. Soap should be destroyed.

The disease is so persistent that the most thorough disinfection is needed and there have been occasions when it was necessary to stop admitting to an institution, or even to close it either wholly or partly for a time.

Venereal Diseases

The common venereal diseases in Britain are syphilis, gonorrhœa, soft chancre and non-specific urethritis.

SYPHILIS is caused by a spirochaete known as the *Treponema pallidum*.

The first sign of infection is a small, hard, painless ulcer or chancre two to four weeks after intercourse with an infected person. It is usually located on or near a genital mucous surface and since it is painless it often passes unnoticed in the female. If the primary disease is untreated, the spirochaetes enter the bloodstream and they may cause lesions in all parts of the body many years after the primary infection. Tissues of the central nervous system and the cardiovascular system are commonly involved. The foetus may be infected in utero by the passage of spirochaetes from maternal to foetal circulation. If the result is fatal to the foetus, pregnancy terminates in a miscarriage or stillbirth. If the infection is less severe a living child may be born infected with the disease. It is said to have congenital syphilis.

Syphilis is one of the few transmissible diseases known to affect the unborn child.

GONORRHOEA is caused by delicate Gram negative diplococci which are readily demonstrable in smears made from discharges of sufferers. Some 36 hours or longer after infection an acute inflammation of the affected mucosa develops. It rarely passes unnoticed in the male because it is associated with smarting or pain and with a thick milky discharge from the urethra. In the female, by contrast, gonorrhœa is often either symptomless or associated with only minor symptoms which may be disregarded. A proportion of infected women become symptomless carriers of gonococci, and hence an unwitting source of infection for men who consort with them. In some instances gonococci cannot be identified in smears from symptomless carriers, who are recognised only when they have been identified as sources of infection because they have transmitted the disease to consorts. If the disease is untreated the gonococcus may enter the general bloodstream or there may be a local spread of the inflammatory condition. In the

female, inflammatory lesions of the tubes are a cause of sterility. A serious form of ophthalmia neonatorum is due to infection of the child's conjunctivae with the gonococcus during its passage through the infected birth canal.

Both gonorrhœa and syphilis are acquired by sexual relations with an infected person. This statement does not, of course, apply to primary extra-genital lesions. Thus, for instance, a midwife or doctor who handles an infected syphilitic placenta without wearing gloves may be infected through a skin abrasion of the hands and develop a primary chancre at the site.

Most venereal infections in men are contracted in the course of casual sex relations either with prostitutes or other promiscuous women. A married person may, however, contract gonorrhœa or syphilis from a spouse already infected before marriage or, of course, infected after marriage through extra-marital contacts.

THE MAGNITUDE OF THE PROBLEM

Although treatment with antibiotics has simplified and increased the effectiveness of the treatment of syphilis and gonorrhœa, both diseases have shown a disquieting increase in many countries including Britain during the last ten years. In recent years in Britain gonorrhœa has been the main problem at venereal disease clinics, and it is well known that a part of the yearly increase in cases since 1954 is attributable to a higher proportion of infections in the later teenage group of the population. In 1962 more than a quarter of the new cases in women were in girls of 15-19 years.

Both congenital syphilis and late syphilis affecting the cardiovascular system and the nervous system are much less common than formerly. Congenital syphilis in particular is now relatively rare in Britain though it still occurs in appreciable numbers in many countries. As to syphilis in pregnancy, the results of tests reported from blood-transfusion centres indicate that about 1 primipara per thousand and 2 multiparae per thousand show serological evidence of the disease.

PREVENTION AND TREATMENT

It is virtually certain that venereal diseases would almost cease to exist in well-developed countries like Britain if people refrained from casual sex acts. The fact has, however, to be faced that there are promiscuous young men and women in the community. It is not possible to ascertain the amount and extent of extra-marital sex relations, but the fact that in 1961 for instance, about 14 per cent of the babies born were conceived outside wedlock is an indication of its frequency. It should, however, be borne in mind that almost two-thirds were legitimated by marriage of parents before the birth of the child.

A cornerstone of any public health programme for the prevention of venereal diseases must, therefore, be to encourage a sense of responsibility about sex conduct as about other aspects of conduct with health implications. The provision of a social setting in which a wholesome

attitude towards sex is possible, and self-discipline reasonably practicable, is clearly a great help.

More specifically, prophylactic measures such as the use of a condom and thorough toilet by washing immediately after exposure would reduce the risk of contracting venereal diseases to a very low level. It is, however, not universally agreed that information about prophylactic measures should be given in ordinary circumstances.

Especially during World War II the Minister of Health took active steps to educate the public about the nature and danger of venereal diseases by press announcements, films and radio talks; and health education (see p. 75) is still regarded as an essential element of prevention and control.

As to treatment, it should be said first of all that it is true of the venereal diseases, as of many other communicable diseases, that the treatment and supervision of infected persons is an indispensable item in preventive programmes.

Special clinics for the treatment of venereal diseases are provided by Regional Hospital Boards. They are attached as far as possible to general hospitals. There is less diffidence now than formerly about seeking treatment at clinics either directly or on the advice of the family doctor. Sexually-casual girls and young women who, though infected, are symptomless require to be persuaded to attend clinics for investigation and necessary treatment. It is important to assure them that examination and treatment are painless, safe, rapid and certain. Impediments to the effective treatment of the venereal diseases are now social rather than medical.

Of special importance to the midwife is the detection and effective treatment of venereal diseases during pregnancy. Blood examinations undertaken as a routine item of ante-natal care should include in addition to blood-typing and haemoglobin estimations, serological tests for syphilis. If this routine were coupled with adequate treatment of women showing serological evidence of syphilis, congenital syphilis would entirely disappear.

In large centres of population venereal disease clinics for the treatment of pregnant women are sometimes run in conjunction with ante-natal clinics. In these clinics, as elsewhere, careful record-keeping is important. Records should indicate the result of tests and an account of symptoms and treatment, where appropriate of both mother and child.

Tuberculosis

Human tuberculosis is caused either by the bovine type or the human type of the tubercle bacillus. Bovine infections enter the body by the alimentary tract and are almost exclusively carried by the milk of cows with tuberculosis of the udder. Human type infections are almost invariably primary respiratory infections carried by dust and air contaminated with the cough spray and sputum of open cases of respiratory tuberculosis. Infection is not always followed by overt disease and when disease develops it does so frequently many years

after infection. The organisms, whether inhaled or ingested, can spread to other parts of the body by the bloodstream and lymphatics, but they do not spread across the placental barrier to the foetus. Congenital tuberculous disease does not occur in man.

It is usual to classify cases of tuberculosis as "respiratory" or "non-respiratory", according as the disease mainly affects the lungs or other organs. Respiratory tuberculosis is also called consumption or phthisis, and non-respiratory tuberculosis is sometimes referred to as surgical tuberculosis.

The death rates from both respiratory and non-respiratory tuberculosis have fallen steadily since 1870 with serious setbacks only during the two world wars. By 1938, mortality from all forms of tuberculosis was less than half the level at the beginning of the century. Since 1949, however, the decline has become dramatic. In that year, there were about 17,000 deaths from respiratory tuberculosis and 2,000 from other forms of the disease. The corresponding figures for 1965 were 2,008 and 274.

The favourable mortality trend does not mean, however, that tuberculosis is no longer a substantial public health problem, as the number of sufferers from the disease, who constitute a pool of infection, has not diminished at a correspondingly rapid rate.

Open cases of tuberculosis (cases with sputum containing living bacilli) are for practical purposes the only sources of infection with human type bacilli, a fact which accounts for many public health measures for the control of the disease.

MEASURES OF CONTROL

Poverty, overcrowding and inferior living standards are often associated with a high incidence of tuberculosis and for many years the decline of the disease in Britain was mainly attributable to social, economic and sanitary progress. Healthy living standards will always be of fundamental importance, but in recent years, control by medical means has become increasingly effective.

Broadly, medical control consists in the early detection of the disease, the treatment of ascertained cases, the surveillance of contacts and, where appropriate, B.C.G. vaccination.

A dramatic breakthrough in the treatment of the disease was the discovery of drugs which have a direct action against the bacillus. The most important of these are streptomycin, p-aminosalicylic acid (PAS) and isonicotinic acid hydrazide (isoniazid). These drugs have not only provided us with an effective cure for the disease, but by rendering patients non-infectious, have also helped substantially to reduce transmission. In practice, about 95 per cent of infectious cases are rendered non-infectious by these drugs.

A few cases do not respond fully to modern drug treatment either because of inadequate dosage or incomplete supervision. These cases create a special problem in as much as they may constitute a pool of drug-resistant bacilli in the community. A common cause of failure is that without effective supervision the patient does not continue

taking the drugs for the rather long period required, *i.e.* two years. This is not astonishing because the intensive drug treatment of tuberculosis is often accompanied by unpleasant side-effects, such as nausea and other gastro-intestinal disturbances, skin rashes and disturbances of hearing and vision. Surveys in the United Kingdom have not, however, revealed hitherto any serious problem attributable to the transmission of drug-resistant organisms.

Notification of all forms of tuberculosis has been compulsory since 1912, and provision for the diagnosis and treatment of tuberculous disease out of public moneys has been general since 1921. Until July, 1948, the major local authorities were responsible for comprehensive tuberculosis schemes, but since the coming into being of the National Health Service their responsibility is shared with the Regional Hospital Boards. A tuberculosis scheme includes:

- (a) Chest clinics.
- (b) Hospitals and specialised units for thoracic surgery, etc.
- (c) Mass radiography units: Case finding.
- (d) After-care provisions, rehabilitation, sheltered employment, hostels for child contacts and various aids in the patient's own home.

Chest clinics, hospitals and other institutions are part of the hospital service, and the Regional Hospital Boards are the principal employers of tuberculosis specialists as they are of other medical and surgical specialists. The major local authorities are left with responsibility for after-care in the home and employ for this purpose nurses who act as tuberculosis visitors. They employ also, usually on a part-time basis, medical specialists in tuberculosis, most of whom are mainly in the service of the Regional Hospital Boards.

THE CHEST CLINIC

The chief functions of the chest clinic are:

- (1) Diagnostic.
- (2) Case finding: Static miniature X-ray units.
- (3) Treatment and supervision of domiciliary cases.
- (4) Supervision of patients before and after institutional treatment.
- (5) Disposal for special treatment.
- (6) Examination and follow-up of contacts.
- (7) Instruction of doctors and other health personnel.

The diagnosis may be made at the chest clinic initially or by the patient's own doctor, but the chest clinic serves as a clearing house.

Mass-radiography reveals tubercular disease in varying proportions of the population in different parts of the country. Among industrial populations the amount of the disease thus found in recent years is of the order of 2-3 per thousand persons examined. The corresponding figure for contacts of tuberculous patients is 7-8 per thousand. The specialised supervision and treatment of ambulant cases of respiratory

tuberculosis is one of the main functions of the chest clinic. In some instances the clinic medical personnel also has charge of hospital beds for the in-patient treatment of selected cases. The responsibility for the day-to-day non-institutional care of the tuberculous patient lies with the family doctor, through whom patients are supplied with drugs.

The clinic team comprises in addition to the chest physician, tuberculosis visitors, nurses and clerical staff. The tuberculosis visitor assists with the supervision of domiciliary cases and with after-care. She also gives advice about infection and social problems.

RESIDENTIAL INSTITUTIONS

Residential institutions for the treatment of tuberculosis include general hospitals, centres for surgical treatment, sanatoria and village settlements. Sanatoria and village settlements are of small importance compared with 20-30 years ago, and the part played by hospitals in the treatment of tuberculosis has also changed radically since the introduction of specific treatment by drugs.

The main reason for admitting patients to hospital at the present time is to provide them with a period of institutional treatment during the initial period of infectivity when close supervision is needed because of the toxic effects of the drugs employed. The usual period for such treatment is about three months, though practices vary from place to place. Another ground for admission to hospital is the need for surgical procedures such as resections and lobectomies for the residuum of cases which fail to respond to drugs.

CASE FINDING

Mass Radiography Units are provided on a regional basis and are administered by Hospital Boards. Their purpose is the detection of early tuberculosis and other intra-thoracic disease. They are used for screening communities in collaboration with health departments and also for surveying special groups such as factory workers, school children and university students.

Tuberculin testing is a second procedure used for screening special groups—particularly school children. Of value in case-finding, it has additional purposes, notably as an aid in epidemiological enquiries and in detecting tuberculin-negative individuals who may then be offered B.C.G. vaccination. (Bacille Calmette—Guérin).

B.C.G. VACCINATION

This is a vaccine consisting of an avirulent strain of live tubercle bacilli. Inoculation of tuberculin-negative individuals results in conversion to the tuberculin-positive state. There is now sufficient evidence to show that B.C.G. vaccination confers a high degree of protection for at least ten years, and the safety of the vaccine is well established.

B.C.G. vaccination was introduced into this country after the Second World War. It is offered especially to the child contacts of infectious cases, to school leavers and to those thought to be at special

risk of tuberculosis by reason of their occupation, notably, nurses and medical students.

The infectious adult is usually admitted to hospital for treatment during the period required for child contacts to convert, *i.e.* six weeks or thereabouts.

TUBERCULOSIS AND CHILD BEARING

Questions about the advisability of pregnancy sometimes arise in relation to respiratory tuberculosis. Generally speaking there is little increased risk to the mother, but special attention should be given to daily rest during pregnancy. If there is active disease a period of prolonged rest with treatment is usually necessary. The usual practice is to admit cases to a chest hospital up to the thirty-sixth week, but later in pregnancy to admit them to a maternity institution.

It is not usually advisable for a woman with open tuberculosis to breast feed her infant because of the risk of mass infection to the child.

BOVINE TYPE INFECTION

As might be expected the prevention of bovine type infections depends on measures for ensuring a safe milk supply. Adequate heat treatment of all milk intended for human consumption is a sufficient safeguard. The milk may be treated either by commercial pasteurisation or by domestic boiling before consumption. No child under 5 years of age can drink raw milk without risk and this is true of milk derived from a Tuberculin Tested herd, for heat treatment is necessary to destroy other pathogens than the bacillus tuberculosis.

Immunisation against Infectious Diseases

DIPHTHERIA

For many years diphtheria was one of the leading causes of death in childhood. Until as recently as 1939 between 50,000–60,000 cases of the disease were notified each year with an average of about 3,000 deaths annually. Since 1941 there has been a steady fall both in the number of cases and the number of diphtheria deaths. In 1965 these figures reached the level of 25 cases and no death. It is beyond reasonable doubt that this remarkable improvement is mainly attributable to immunisation.

Active artificial immunisation against diphtheria confers a high degree of protection—not 100 per cent—but so effective that deaths among children who have been immunised within five years of contracting the disease are almost unknown, and the chance of an immunised child contracting the disease is small. The diphtheria immunisation index in 1965, for children under five was 67; *i.e.* the percentage of children who had had a primary course of immunisation or a reinforcing dose within the previous five years.

The prophylactics which have been used in Britain in recent years

are formal toxoid (F.T.), alum precipitated toxoid (A.P.T.), purified toxoid aluminium phosphate (P.T.A.P.), toxoid antitoxin floccules (T.A.F.) and combined vaccines, including diphtheria, tetanus, pertussis (triple vaccine). The last mentioned, *i.e.*, triple vaccine, is the preparation now recommended for general use. The course of primary immunisation consists of 2-3 injections at intervals of 4-6 weeks completed before the age of one year. A reinforcing dose of triple vaccine is recommended at 18-21 months, and final reinforcing doses of formal toxoid (F.T.) at school entry and again at 8-12 years.

Routine Schick testing is not undertaken in children but is probably advisable for immunising older children and adults for the purpose of detecting violent reactors.

WHOOPING COUGH

The triple vaccine referred to in the preceding paragraph is an effective prophylaxis against pertussis. Although complete protection is not given, there is good evidence that whooping cough vaccines prevent an attack in a substantial proportion of cases or modify severity should it occur. Between 1950 and 1960 the number of cases fell five-fold to about 30,000 annually and the number of deaths fell 15-fold to less than 30 annually. Most of the deaths which still occur are in the first year of life. The period of highest incidence of the disease is from one to four years.

TETANUS

Tetanus toxoid (T.T.)—tetanus toxin altered by formalin is a highly effective antigen. It is now offered routinely, as a rule as a constituent of the triple vaccine already mentioned.

An advantage of active immunisation is that the immunised person can be protected in the event of an injury by a reinforcing dose of T.T. instead of with tetanus antitoxin, with its associated anaphylactic hazards.

POLIOMYELITIS

A vaccine prepared from live attenuated virus strains (Sabin type) is now widely used.

Excellent results have been reported. In Czechoslovakia, for example, where an intensive campaign was carried out in 1961, a careful follow-up has not disclosed a single paralytic case since the campaign was completed. Similar results have been reported from other countries, notably from the U.S.S.R.

Poliomyelitis vaccine for oral administration became available in Britain for routine use in February 1962. The recommended course consists of three doses, each of three drops, at intervals of 4-8 weeks.

Protection against poliomyelitis is now offered to all persons under 40 years of age. It is also offered to general practitioners and their families, members of hospital staffs and certain other special groups. Local authorities are responsible for vaccinating the main group of

eligible persons and also for supplying general practitioners with vaccine.

The live vaccine has advantages over the earlier inactivated vaccine. It is given by mouth instead of by injection; it provides local gut immunity as well as humoral immunity. (The inactivated vaccine provides only humoral immunity.) It is not contra-indicated during periods of high poliomyelitis prevalence and it may be used routinely in any season. In epidemics it can be used to colonise the gut of susceptible members of the population and thus prevent the spread of the "wild" virus in the community. It is probable that the immunity conferred by the live virus is more lasting than that conferred by the inactivated vaccine.

TUBERCULOSIS

Freeze-dried B.C.G., a suspension of an attenuated strain of the *Bacillus* of Calmette and Guérin, is the vaccine used at present in Britain for the control of tuberculosis. The protection it affords is substantial, though not absolute.

The present practice is to offer B.C.G. vaccination from 10 years onwards, at the discretion of the M.O.H., to tuberculin-negative children. It is also offered to student groups, to hospital staffs and contacts of known cases, in each instance only when they have been found negative to tuberculin testing.

SMALLPOX

There is overwhelming evidence that successful vaccination confers a high degree of individual protection against smallpox which wanes with the lapse of time. Healthy living conditions, good sanitation and general public health measures are no substitute for vaccination for the prevention and control of smallpox. To what extent the present vaccinal state of the population in Britain acts as a check on the spread of smallpox is somewhat uncertain, but it is likely that it is a factor of importance when smallpox is introduced from abroad.

Until recently, primary vaccination was recommended a little before the age of six months. It is now recommended that it should be undertaken some time during the first two years of life, and preferably during the second year because there is evidence that the risk of complications is then at its lowest. After early childhood primary vaccination is not advised as a routine. Routine re-vaccination is recommended between the ages of 8-12 years. The multiple pressure technique is an alternative to the scratch method. For routine vaccination a single insertion is sufficient. For the protection of contacts of a case of smallpox, two insertions at least one inch apart are necessary.

Contra-indications to routine vaccination include general ill-health, eczema and certain other skin diseases. A point that is sometimes lost sight of is that patients with vaccinia lesions may infect contacts who suffer from eczema. Post-vaccinal encephalomyelitis is a serious but rare complication of vaccination. The risk associated with primary vaccination in early infancy is minimal and re-vaccination in later life

is without risk. Since vaccination (or re-vaccination) may be necessary for purposes of foreign travel, for persons joining the armed forces or for contacts of a case of smallpox, primary vaccination during the first two years of life has obvious advantages.

CALENDAR OF IMMUNISATION PROCEDURES

The organised programme of immunisation at present in operation in Britain comprises procedures against six infectious diseases, *i.e.*: diphtheria, whooping cough, tetanus, poliomyelitis, smallpox and tuberculosis.

As these procedures are carried out during childhood—most of them during the first two years of life—it is necessary to consider not only the individual procedures in isolation but also their sequence and timing as elements of a programme.

Among the factors which have to be taken into account in designing a schedule of immunisation procedures are the following:

- (1) The provision of the best possible immunity against each particular disease; *e.g.* the fact that the ability to form antibodies in response to an antigenic stimulus may not be fully developed before the age of six to nine months.
- (2) The number of injections should be as few as possible. Other things being equal, it is clearly an advantage to combine prophylactics for routine immunisation in childhood. It is now accepted, for instance, that triple prophylactics (against diphtheria, tetanus and whooping cough) are effective.
- (3) Whether prophylactics are used singly or in combination, the risk of causing harmful reactions or complications must be kept at a minimum.
- (4) Due regard should be had for the age-period at which a particular disease risk is at its greatest.

It is clear that no schedule of procedures will completely fulfil all the ideal requirements; it will necessarily be a compromise and will need revising from time to time.

Examples of schedules are given below:

EXAMPLES OF SCHEDULES OF IMMUNISING PROCEDURES*

A. 1—6 months

3 injections of diphtheria, tetanus, pertussis vaccine with 4—6 weeks' intervals.

* Active Immunisation Against Infectious Disease, Ministry of Health, March 1963. The Ministry of Health publication also discusses six other prophylactics which are not offered routinely, *i.e.* against influenza, typhoid and paratyphoid fever, yellow fever, cholera, rabies and measles. For details the reader is referred to the publication.

7—11 months

3 doses of oral poliomyelitis vaccine with 4—8 weeks' intervals.

18—21 months

Diphtheria, tetanus, pertussis vaccine (injection 4).

Smallpox during first two years, preferably in the second year.

School entry diphtheria and tetanus**8—12 years**

Diphtheria and tetanus

Smallpox re-vaccination

over 12 years

B.C.G. (may be given at age 10 years or more at the discretion of the M.O.H.).

B. 1—6 months

3 injections of diphtheria, tetanus, pertussis vaccine with intervals of 4—6 weeks.

7—10 months

2 injections of poliomyelitis vaccine separated by 4 weeks' interval.

15—18 months

Injection with poliomyelitis vaccine.

18—21 months

Injection with diphtheria, tetanus, pertussis vaccine (injection 4).

Thereafter, as in schedule "A" above.

C. A simplified calendar comprising the triple vaccine and oral vaccine against poliomyelitis at monthly intervals on three occasions (4 months, 5 months and 6 months) and vaccination against smallpox at 1 year is used in some areas. This schedule has the advantage of administrative simplicity and is easier to comply with than the more complex timetables.

The individual doctor will select the schedule best suited to his purpose and will, if necessary, modify it to meet particular circumstances.

CHAPTER X

HEALTH STATISTICS OR THE ARITHMETIC OF HEALTH AND DISEASE

The word "statistics" has two meanings. It is used on the one hand to refer to a branch of mathematics or a methodology, and on the other hand to statements of fact derived from the application of the method. Such statements are usually numerical in character, as, for instance, statistical tables and rates, or they may be pictorial or graphical. Both forms of statement are used in the present chapter.

The statistical method is widely used in fields other than medicine. It is extensively used, for instance, in science, industry, economics, and social studies.

So far as we are concerned here, it is largely a method of collecting, counting and analysing numerical data about large numbers of things or events, and of presenting them in a convenient and readily intelligible form.

Perhaps the most familiar example is the statement of an average or mean value. Supposing, for instance, we wish to summarise the recorded heights of a group of 10,000 children, we can do so conveniently by calculating the mean height for the group. We should also probably wish to calculate for the group an index of the scatter or dispersion of the recorded heights about the mean value. We might, for instance, state in addition to the mean height a measure of scatter called the *standard deviation*. There is no need to consider here the precise nature of this index, it will be sufficient to illustrate the problem by taking a simple example. Let us say that three persons in a group have heights respectively of 5 ft., 5 ft. 6 in., and 6 ft., then the average height in the group is 5 ft. 6 in. Let us next consider another group of three persons of heights 5 ft. 5 in., 5 ft. 6 in., and 5 ft. 7 in. The average height in this group is also 5 ft. 6 in., but it is obvious that the range of heights in the two groups differs widely. The standard deviation would indicate this feature of distributions.

Other uses of the statistical method include:

- (1) The calculation of indices of association between two or more variables, *i.e.* a measure of how much the value of one depends on, or is implied by, the value of the other (*e.g.* correlation coefficient).
- (2) As an aid to scientific inference or the process of drawing valid conclusions from facts. It is often necessary, for instance, to state the probability that a difference from an expected value is not merely a chance occurrence. (*Tests of significance.*)
- (3) To establish sound sampling procedures and to test the validity of conclusions based on samples.

It is, however, with health statistics and vital statistics that we are concerned here. These expressions are sometimes used as though they were synonymous, though strictly speaking vital statistics relates mainly to births, deaths, and the size and structure of human populations

whereas health statistics is more comprehensive, including in addition the statistics of sickness and items of medical care, and other aspects of the accountancy of organised health services. It is mainly with vital statistics that this chapter is concerned, and because our interest is mainly in statistical facts as distinct from statistical methods, it bears the sub-title "The Arithmetic of Health and Disease".

Many useful health statistics can be compiled without reference to the size of the population to which they relate. In the absence of this information, for instance, useful information can be compiled about the volume of hospital admissions, the burden of incapacity from sickness in the community, or the arrangements made for the care of women in childbirth. For some purposes, and especially as a guide to the planning of organised medical care services, it is often sufficient to know the number of births or other events which occur. When the purpose is to compare changes in the health of the community over a period of time, or to compare the health of one community with another, then the number of births or deaths, or the number of disease incidents have to be related to the sizes of the population in which they occur. Thus, two elements are needed as a rule for the compilation of national vital statistics. These are:

- (1) a system for counting events such as births, deaths, marriages and the occurrences of disease; and
- (2) a means of obtaining numerical information about the population in which the events occur, *i.e.* the total size and age and sex structure of the population.

The first group of data is obtained by registration and notification procedures; the second, by means of a population count or census. Reference is made to these procedures below and to a number of rates, *e.g.* birth rate, death rate.

CENSUS

A census or count of the population of Britain has been made every tenth year since 1801, with the exception of 1941 when there was no census because of the War. The responsibility for conducting the census lies with the General Register Office, and is based on a questionnaire completed by householders and certain other persons on a prescribed day, *i.e.* the population is enumerated by requiring householders to complete a schedule on the census day. Much useful information about such facts as occupation and social status are obtained in addition to information about the size and age-structure of the population. In 1966 Britain had a census after an interval of five years for the first time. It was called a "sample census" because it was based on a 1 in 10 sample of the population, and not on the whole population as in full census years.

Registration of Births and Deaths and the Notification of Births*

REGISTRATION OF BIRTHS

The primary purpose of birth registration is to provide statistical information. Since June 30th, 1927, the following have to be registered:

(a) A live born child, whatever the period of pregnancy.

(b) A stillborn child after the 28th week of pregnancy.

The birth of a child before the 28th week of pregnancy which did not breathe or show any other sign of life need not be registered.

REGISTRABLE BIRTHS AS DEFINED MUST BE REGISTERED:

With—The Registrar of Births and Deaths for the district in which the birth occurs;

By—The parent;

Within—42 days.

Any person present at the birth, an occupier of the premises at which the birth took place, or the chief resident officer of a maternity institution, usually the matron, may act as informant when neither parent can do so.

In addition to information which is entered in the register (including date, and place of birth, name of father and mother, rank or profession of father, and in the case of stillbirths a note of evidence upon which registered as stillborn), the registrar is now required to obtain further particulars for the purposes of the Population Statistics Act, 1938. These are not entered in the register. The information is confidential and is used only for statistical purposes. It includes the mother's age, date of marriage, and particulars of previous children. No fee is payable for registration, but a fee is payable for birth certificates supplied.

The birth of an illegitimate child is registered by the mother. The father's name is not entered on the birth certificate unless the father attends at the time of registration with the mother, and both request that this shall be done.

REGISTRATION OF STILLBIRTHS

When a stillbirth is registered the registrar provides a certificate of registration, without which the body may not be buried.

The informant must either:

- (a) Give to the registrar a certificate signed by a medical practitioner or by a certified midwife who was in attendance or who has examined the body of the child, that the child was not born alive, or
 - (b) Make a declaration that no medical practitioner or certified midwife was present at the birth or has examined the body and that the child was not born alive.
 - (c) Since 1960, certificates of stillbirth signed either by a registered medical practitioner or by a certified midwife have been required to include where possible, in addition to a statement that the child was not born alive, a statement "to the best of the knowledge and belief of the person signing it, the cause of death and the estimated duration of pregnancy . . ."
- [Population (Statistics) Act, 1960.]

In connection with a stillbirth a midwife is therefore required;

- (1) To notify the stillbirth to the M.O.H. of the welfare authority (Public Health Act, 1936, and Public Health (London) Act, 1936).
- (2) To notify the local supervising authority in accordance with the rules of the Central Midwives Board; and additionally
- (3) She may have to sign a certificate of stillbirth in the prescribed form mentioned under (a) above.

REGISTRATION OF DEATHS

Deaths are registered with the local registrar, usually within 5 days. The registrar issues a certificate of registration, without which the body may not be buried, unless on a coroner's order.

A medical practitioner who has attended a person during his last illness must give a certificate of death, unless the circumstances are such that he deemed it necessary to report the death to a coroner.

A death certificate states the immediate cause(s) of death. It is delivered by the medical practitioner to the registrar in a sealed envelope provided for the purpose. Another certificate which states only that a death certificate has been signed, but does not give particulars of the cause of death, is given by the medical practitioner to the person required to register the death. The purpose of this procedure is to avoid disclosing the cause of death to persons other than the registrar.

If a live born child dies shortly after birth, both the birth and death need to be registered.

NOTIFICATION OF BIRTHS

Notification of births to the local M.O.H., which has been compulsory in all areas since 1915, is now made under the Public Health Act, 1936. The purpose is primarily medical; to enable the M.O.H. to advise nursing mothers through health visitors and to investigate causes of stillbirth. Notification is in addition to registration of births with the local registrar.

It is recommended that a statement of the birth weight should be included whenever it is $5\frac{1}{2}$ lbs. or less. This assures that the M.O.H. gets to know of low birth weight babies without delay.

NOTIFICATION of any LIVE BIRTH OR STILLBIRTH AFTER THE 28th WEEK OF PREGNANCY, must be made in writing:

To—The M.O.H. of the Local Health authority;

By—The father or any person in attendance on the mother;

Within—36 hours.

The authority supplies printed addressed postcards to all medical practitioners and midwives in the area. Notification is usually left to the midwife and it should be her invariable practice to complete and post the card provided as soon as possible after the birth of the child at which she has been in attendance.

RATES IN COMMON USE

As already mentioned, in order to provide a basis for comparison between occurrences in one year and another, or between one place and another, it is necessary to relate occurrences to the populations in which they occur. This is done by stating "rates", *e.g.* birth rate, death rate, infant mortality rate. Definitions of a number of rates in common use are given below.

The death rate for any year (or more precisely the crude death rate) is defined as the ratio of annual deaths to mean population, expressed for convenience as a rate per thousand of population, *i.e.*:

$$\text{Crude Death Rate} = \frac{\text{Number of deaths in year} \times 1,000}{\text{Mid-year population}}$$

Similarly, the birth rate (*i.e.* live birth rate) is the number of registered live births per thousand of population, *i.e.*:

$$\text{Birth Rate} = \frac{\text{Number of registered live births} \times 1,000}{\text{Population}}$$

The Infant Mortality Rate is the ratio of deaths of infants under one year of age per thousand related births—approximately the same as the number of live births occurring during the year, *i.e.*:

$$\text{Infant Mortality Rate} = \frac{\text{Number of infant deaths (under one year)} \times 1,000}{\text{Number of live births in the year}}$$

The infant mortality rate is said to be an age-specific rate in as much as it relates to deaths during one year of age only *i.e.* 0–1 year.

Because deaths during the first few weeks of life are mainly attributable to ante-natal or obstetric factors, a separate rate for the first four weeks of life is calculated. This is called the Neo-natal Death Rate and is defined as:

$$\text{Neo-natal Death Rate} = \frac{\text{Number of deaths at 0–28 days} \times 1,000}{\text{Number of registered live births}}$$

Still Birth Rate:—is the ratio of still births to each 1,000 total (live and still) births, *i.e.*:

$$\text{Still Birth Rate} = \frac{\text{Number of still births} \times 1,000}{\text{Total (live and still) births}}$$

Peri-natal Mortality Rate. This term has come into use in recent years to describe the combination of still births with early neo-natal deaths (deaths under one week) per 1,000 total births (live and still), *i.e.*:

$$\text{Peri-natal Mortality Rate} = \frac{\text{Number of still births plus deaths under one week} \times 1,000}{\text{Total (live and still) births}}$$

Maternal Mortality Rate:—is the ratio of maternal deaths associated with pregnancy and child-bearing to the total number of births (live and still), expressed as a rate per 1,000; *i.e.*:

$$\text{Maternal Mortality Rate} = \frac{\text{Number of maternal deaths associated with pregnancy and child bearing} \times 1,000}{\text{Total (live and still) births}}$$

MORTALITY AND MORBIDITY STATISTICS

The midwife and health visitor are especially interested in the statistics relating to infants and the childbearing woman, and the greater part of the chapter is devoted to these subjects. We shall also refer briefly to national statistics of death and sickness known respectively as mortality and morbidity statistics. It will be noticed throughout the chapter that the statistics of death have greater prominence than statistics of sickness. This is not because morbidity statistics are unimportant, but because they are far less complete and less simple than statistics of mortality, and especially so in relation to childbearing and infancy.

For instance, a person may be ill more than once or may suffer from two or more diseases concurrently. Moreover, illnesses cannot always be diagnosed with certainty and their duration must also be taken into account in meaningful statistics as must the degree of incapacity associated with them.

Table 3 below shows that the crude death rate has fallen steadily from 16.9 per thousand in 1901 to 12 or thereabouts per thousand during the last three years (the birth rate trend is discussed later, see p. 179). Another way of indicating the substantial improvement which has occurred within the limits of the present century is the change in the expectation of life at birth. Since 1901 this has increased by 22 years for males and by 23 years for females.

TABLE 3
NUMBER OF BIRTHS, BIRTH RATES AND DEATH RATES,
ENGLAND AND WALES, 1901-1963

Year	1901	1911	1921	1931	1941	1951	1961	1963	1965
Births (in thousands) ..	932	883	862	432	587	680	803	856	863
Birth Rate	28.7	24.4	22.8	15.8	14.2	15.5	17.4	18.2	18.1
Death Rate (crude) ..	16.9	14.6	12.1	12.3	13.5	12.5	12.0	12.2	11.5

If next we consider the main groups of causes of death at the present time as shown in Table 4 and contrast these with the main causes 100 years ago, it is seen that the present pattern of disease is the latest stage in the evolution of disease patterns characteristic of highly developed industrial communities.

TABLE 4
DEATHS IN ENGLAND AND WALES 1965. MAIN GROUPS OF CAUSES.
ALL AGES (PERCENTAGE OF ALL CAUSES)

Diseases of the heart and arteries and vascular lesions of nervous system	52%
Cancer and other malignant diseases	19%
Pneumonia and bronchitis	12%
Violence	4%
Bacterial and virus diseases including T.B.	1%
All other causes	12%
	<u>100%</u>

A hundred years ago the pattern was quite different. Some 50 per cent of all deaths were then attributable to the communicable diseases (including tuberculosis) and much smaller proportions to the cardiovascular diseases and cancer. This remarkable change, which is a characteristic of the well-developed countries in general, is attributable in part to the reduction of the communicable diseases as causes of death, and in part to the consequential fact that more and more people survive to ages at which cardiovascular diseases, degenerative diseases and cancer are common. The present pattern contrasts not only with the pre-existing pattern in Great Britain, but also with the disease pattern which still prevails in the under-developed areas of the world. In these areas malnutrition, worm infestations, infective intestinal disorders, tuberculosis, acute respiratory and other infections, and vector-borne diseases such as malaria, are the main causes of death. Many of them, it should be noted, are diseases which take a particularly heavy toll in infancy and childhood.

As we have mentioned, national statistics of morbidity are less complete than statistics of mortality. With the exception of the notifiable diseases, which we referred to earlier, (see p. 126) national statistics of morbidity have been collected in Britain only since 1945. They include statistics derived from general practitioners' and hospital in-patient records, and from other more restricted sources such as national insurance statistics and the statistics of notifiable industrial diseases. They show, as might be expected, a disease pattern quite different from that presented by statistics of death. The common cold and other upper respiratory infections, influenza and bronchitis, diseases of the stomach, arthritis and rheumatism, and a wide range of mental or psycho-neurotic disorders are the common conditions for which people consult their family doctor or take time off work.

Without pursuing the matter, these are the common causes of recoverable illness and incapacity in Britain, whilst the cardiovascular diseases, the degenerative diseases of advancing years, chronic bronchitis, the cancers and violence, are now the leading causes of death.

The Mortality of Mothers and Infants

Included under this heading are Infant Mortality, peri-natal deaths, Stillbirths, and Maternal Mortality. The rates for selected years or periods are given in Table 5.

Reference is also made to prematurity and congenital malformations as leading causes of infant deaths.

The peri-natal mortality rate was 62 in 1931; 55 in 1941; 38 in 1951; 32 in 1961; and 27 in 1965.

INFANT MORTALITY

There is no area in the whole field of vital statistics which has been more thoroughly explored than mortality in the first year of life.

Of the many causes of infant deaths, some are more common during the first few days or weeks of life, and others operate mainly from the

TABLE 5

THE OBSTETRIC MORTALITY RATES, ENGLAND AND WALES, 1901-1961

Year	1901 -05	1926 -30	1931 -35	1936 -40	1941 -45	1946 -50	1951 -55	1956 -60	1961	1965
Infant Mortality Rate	138	68	62	55	50	36	27	23	21	19
Neo-natal Rate	—	32	31	29	26	21	18	16	15	13
Stillbirth Rate	—	40	41	38	30	24	23	21	19	15·8
Maternal Rate	4·27	4·01	4·12	3·36	1·80*	0·95*	0·60*	0·35*	0·27*	0·19*

* Excluding deaths due to abortion.

first month of life onwards. Fatalities during the early days of extra-uterine life are predominantly associated with conditions having their origin either before birth or during birth. The causes of death in older infants, on the other hand, lie mainly in the post-natal environment.

As a consequence, it is useful to calculate separate rates for deaths during the first 4 weeks of life, *i.e.* neo-natal death rate, and for deaths between the ages of 4-52 weeks, *i.e.* the post-neo-natal death rate. It is also convenient, notwithstanding a certain amount of overlap, to combine stillbirths and deaths during the first week of life in a single rate, *i.e.* the peri-natal mortality rate. This is so because especially at 0-7 days, the causes of death largely coincide with the causes of stillbirth. Moreover, the combination avoids ambiguities arising out of the distinction between stillbirth and live birth with intra-partum or immediate post-partum death.

THE TIME TREND AND GEOGRAPHICAL DIFFERENCES

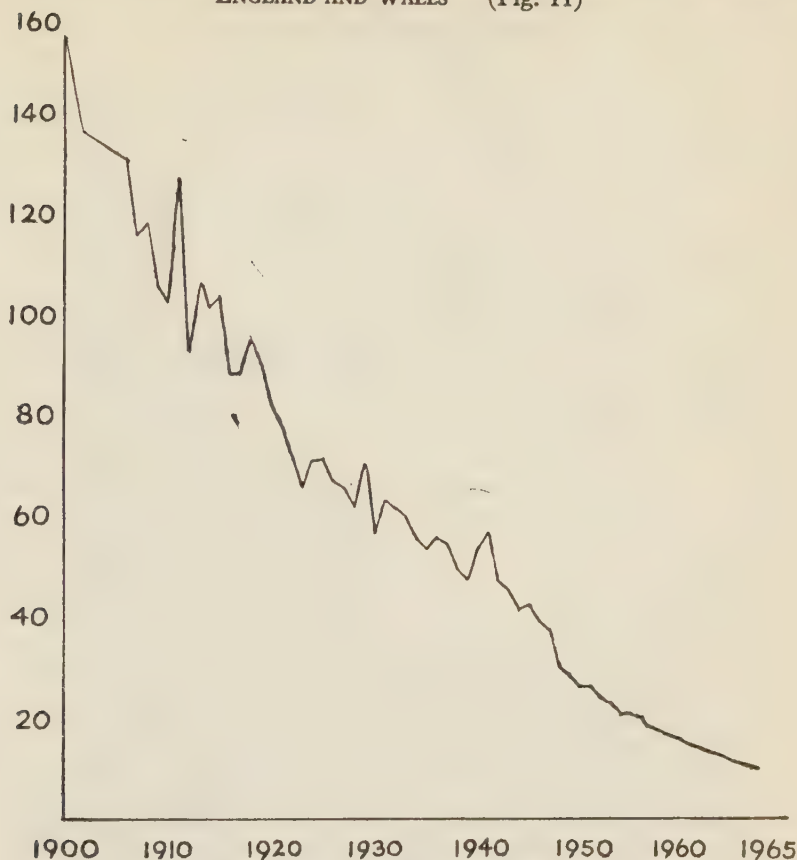
In common with many other western countries, the infant mortality rate for England and Wales began to decline towards the end of the 19th century, since when it has been halved three times over. The trend since 1900 is shown in Fig. 11, from which it is seen to have fallen from 154 at the beginning of the period to 19 per thousand live births in 1965.

The improvement has been associated unmistakably with the gradual bettering of social and material conditions which have occurred during the period and latterly with improved obstetrics and child care.

Big differences still exist between countries. In some African countries, for instance, the infant mortality rate was as high as 200 in 1964; and even within Europe, the range is considerable. The examples given in Fig. 12 show Sweden and the Netherlands to have infant mortality rates of 14 and 15 respectively while at the other end of the scale are Portugal and Yugoslavia with rates of 69 and 74.

A relatively wide range of rates also exists between one town and another and between geographical regions in England and Wales, though. The difference between urban and rural areas, once consider-

DEATHS OF INFANTS UNDER ONE YEAR PER THOUSAND LIVE BIRTHS,
ENGLAND AND WALES (Fig. 11)

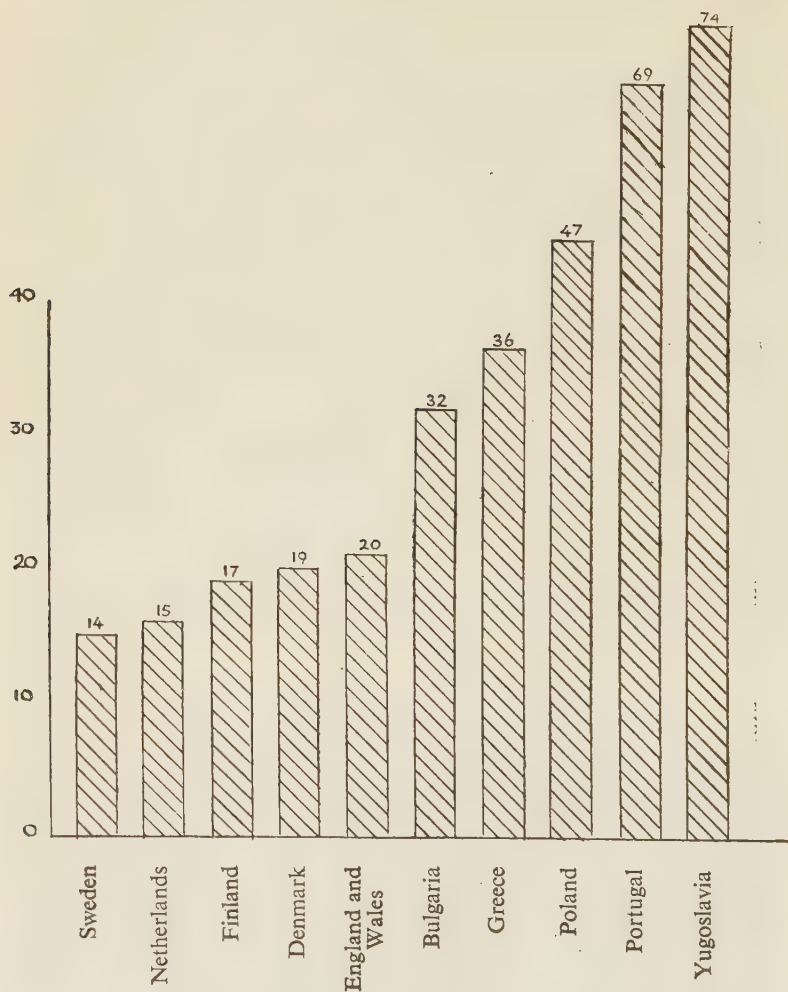


able, is now small. The regions referred to in Fig. 13 are geographical areas into which England and Wales has been partitioned by the Registrar General for statistical purposes. They are shown in the sketch map on page 165. The reader will note the relatively unfavourable infant mortality rates in Wales and the North and Midlands of England, as compared with the Southern, Eastern and South-Western Regions.

The differences between various towns is also noteworthy. In 1963, the rate for England and Wales as a whole was 21. In London boroughs, it varied between 11 for Finsbury and 52 for Holborn. In county boroughs the range was also great—from 14 in Bath to 35 in Bootle and Merthyr Tydfil.

The foregoing facts indicate the saving of infant life which could result if the rates for England and Wales as a whole were reduced to the low rates quoted for some towns, or for that matter for Sweden and the Netherlands.

INFANT MORTALITY RATES
FOR 1964 IN VARIOUS COUNTRIES
RATES PER 1,000 LIVE BIRTHS
(Fig. 12)



The low rates now recorded in many large towns and cities are evidence that urban, industrial life is not incompatible with low infant mortality rates. There is no reason to think that such low rates cannot be achieved nationally, or indeed that they will not be achieved in the near future.



ENGLAND AND WALES (Fig. 13)

The map shows how England and Wales has been partitioned into geographical areas by the Registrar General. Infant Mortality Rates for 1963 are inset.

With the relatively low infant death rates now prevailing in England and Wales, it is, however, the case that effective programmes for further reducing infant mortality have to be based mainly on studies of single

causes of death rather than on the aggregated infant death rate. We shall therefore, next consider the main causes of infant deaths and stillbirths.

The Main Causes of Infant Deaths

Table 6 shows the principal causes of infant death (*a*) during the first year of life, (*b*) during the first 4 weeks of life, and (*c*) from 4 weeks onwards.

TABLE 6
MAIN CAUSES OF INFANT MORTALITY,
ENGLAND AND WALES, 1965

(*a*) Deaths 0-1 year

	Rate per 1,000 live births
Congenital malformations	3.9
Bronchitis and pneumonia	3.1
Immaturity	2.9
Asphyxia and atelectasis	2.7
Birth injury	2.1
Haemolytic disease	0.4
Accidental suffocation	0.2
All other causes*	3.7
All causes	19.0

* Including Whooping cough (0.002), Measles (0.003), Tuberculosis (0.001) and Convulsions (0.001).

(*b*) Deaths under 4 weeks

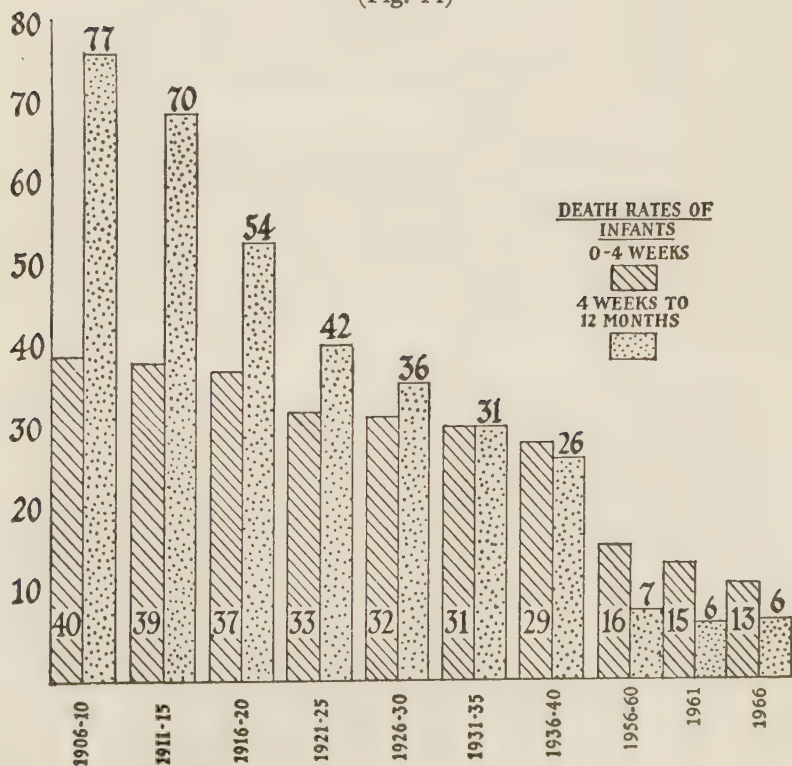
	Rate per 1,000 live births	Percentage of all causes 0-4 weeks
Immaturity	2.9	22%
Asphyxia and atelectasis	2.7	20%
Congenital malformations	2.6	20%
Injury at birth	2.1	16%
Other causes	2.7	22%
All causes	13.0	100%

(c) Deaths 4-52 weeks

	Rate per 1,000 live births	Percentage of all causes 4-52 weeks
Congenital malformations	1.3	22%
Bronchitis and pneumonia	2.5	41%
Gastro-enteritis	0.4	7%
Other causes	1.8	30%
All causes	6.0	100%

It will be noted that deaths in the neo-natal period account for over two thirds of all deaths at 0-1 year; and that during this period (0-4

INFANT MORTALITY RATES, ENGLAND AND WALES AT
AGES 0-4 WEEKS, AND
4 WEEKS 12 MONTHS (1906-1966)
(Fig. 14)



weeks) the commonest causes of death are immaturity, asphyxia and atelectasis, birth injury and congenital malformations, all conditions mainly of pre-natal or intra-natal origin.

In the post-neo-natal period (4-52 weeks) a considerable number of deaths are attributable to congenital malformations, which was prominent as a cause of death at 0-4 weeks. Excluding this group, post-neo-natal deaths are mainly due to infection and other environmental conditions operating after birth. Deaths from bronchitis and pneumonia predominate during this period. In marked contrast with the situation 40 or so years ago, gastro-intestinal conditions now account for only a small fraction of infant mortality.

Fig. 17 shows that until 1936 or thereabouts, the decline in infant mortality was attributable mainly to a steady decline in deaths at 4-52 weeks, whereas since then most of the decrease has been in the period 0-4 weeks with less change at 4-52 weeks.

The lower death rates from pneumonia and bronchitis and from accidents, in particular in the well-to-do as compared with the less favourably situated groups in the community, justify an expectation of further decreases in death from these causes in the future. In the period 1949-53, for instance, deaths from these causes were six times as common in Social Class V as in Social Class I.* The decrease will presumably be brought about by higher standards of child care and early and more effective medical care of respiratory infections. Standards of living, housing conditions, general education, family size and personal hygiene are all relevant factors.

The same factors can also be expected to influence the level of neo-natal deaths, but further reductions of the death rate at 0-4 weeks are likely to be brought about in the main by improved medical care and other provisions for the pregnant and parturient woman. Such measures will include attention to the pregnant woman's general health and diet, ante-natal care directed particularly to the control of toxæmia, skilled obstetrics, the care of the premature infant, and further researches into the causes of neo-natal deaths.

Stillbirths

Stillbirths have been registered in England and Wales since 1927. The stillbirth rate at the time was around 40 per 1,000 births and remained stubbornly resistant to improvement until after 1940. Since then it has fallen to a level of 15.8 per 1,000 births in 1965.

The interpretation of these facts is not easy because parity order and maternal age as well as medical and social circumstances influence the level of risk that a child is stillborn, and these factors have all varied during the period in question. The rate is known to be relatively

* The Registrar General's Classification of Social Class was based on the father's occupation. Five Social Classes are distinguished, *i.e.*

Class I.	Upper professional and managerial strata.
Class II.	Lesser employers, managers and professions.
Class III.	Skilled and black-coated workers.
Class IV.	Semi-skilled, including agricultural workers.
Class V.	Unskilled labourers.

high for first-born infants of mothers 30 years of age and more, and for a given maternal age it is higher for first-born than for parities up to about the eighth. It is lowest for second-born and then rises steadily with increasing parity order. In general, the age of the mother influences the stillbirth rate more than does birth order.

Improved standards of living including the better diet of pregnant women during World War II and since, improved medical care, especially ante-natal care and better obstetric care at delivery are all believed to be factors of importance, though their contribution cannot be assessed precisely.

It was mentioned on p. 157 that causes of stillbirth have been registered in England and Wales since 1960. Table 7 shows selected causes as a percentage of the 13,841 stillbirths registered in 1965.

TABLE 7
SELECTED CAUSES OF STILLBIRTH,
ENGLAND AND WALES, 1965

Cause	Percentage of all stillbirths (approx.)
Toxaemia	12%
Haemorrhage and premature separation of placenta	12%
Cord conditions	8%
Difficult labour	5%
Malformation of central nervous system	16%
Maceration	6%
Erythroblastosis	5%
Birth injury	2%
Chronic diseases in mother	3%
All other causes	31%
	100% (13,841 stillbirths)

Related to duration of pregnancy, toxaemia and haemorrhage predominate between 28 and 35 weeks; anencephaly between 32 and 39 weeks; and disproportion, malposition and cord conditions (often associated with cranial injury and asphyxia) after 40 weeks.

Peri-natal Mortality

As nine out of ten neo-natal deaths occur in the first week of life, little need be added on the subject of peri-natal mortality to what has been said already about stillbirths and deaths in early infancy.

A fact to be borne in mind, however, is that deaths from the 28th week of pregnancy to the end of the first week of life account for 77 per cent of the total loss of infant life (1963, when the number of peri-natal

deaths was 25,487). The main causes, as we have seen, are prematurity, asphyxia and atelectasis, birth injury, congenital malformations and haemolytic diseases of the newborn, conditions which arise in association with genetic disorders, harmful influences in the uterine environment (*e.g.* radiation, drugs, maternal infection) and events during labour.

An indication of the improvement which might occur without further advances in medical science and practice is afforded by the fact that peri-natal mortality in Social Class I is half that in Social Class V.

Various studies in recent years have identified measures which should be taken to reduce peri-natal mortality, namely:

- (1) thorough ante-natal supervision;
- (2) the identification of high risk groups amongst pregnant women and booked hospital confinement for this group;
- (3) special care of immature and low birth weight babies;
- (4) the recognition of foetal distress and intra-partum anoxia and active resuscitation of an asphyxiated infant;
- (5) prompt treatment of haemolytic disease of the newborn.

Premature Births

Birth weight is a useful index because babies are usually weighed at birth, whereas the gestation period is often to some extent conjectural. The premature, or "low birth weight baby", is defined as one weighing $5\frac{1}{2}$ lbs. (2,500 grams.) or less at birth, whatever the gestation period may be. The term "low birth weight" recommended by an Expert Committee of the World Health Organisation is now commonly used instead of "prematurity".

Statistics of prematurity have been collected by Local Health Authorities in England and Wales since 1953. This is done by requiring a birth weight of $5\frac{1}{2}$ lbs. or less to be recorded on the Notification of Birth card. From the information thus given to Local Health Departments, in the first instance, national statistics are compiled by the Ministry of Health.

There has been little change in the incidence of low birth weight since 1953. The proportion of notified live births which were premature ($5\frac{1}{2}$ lbs. or less at birth) was 6.4 per cent in 1965. The proportion of stillborn babies weighing $5\frac{1}{2}$ lbs. or less in the same year (1965) was 56 per cent.

Mortality in premature infants is high and over a third of premature infants are likely to be mentally or physically handicapped. About a quarter of all premature infants are either stillborn or die within 28 days of birth, or to put it another way, prematurity is associated with no less than 60 per cent of deaths in the first week of life.

As might be expected, mortality is highest in the lowest birth weight group and diminishes with increasing birth weight.

Death rates according to birth weight in 1964 are given on next page.

Prematurity is not a single, aetiological entity. Four big categories can be distinguished—though there is a good deal of overlapping. They are: prematurity associated with multiple pregnancy; with congenital malformation; with maternal toxæmia; and a group which is un-

TABLE 8
DISTRIBUTION OF BIRTH WEIGHTS
(5½ lbs. and less)

Birth weight group	Deaths within 28 days per 1,000 live premature births
2 lbs. 3 oz. or less	851
3 lbs. 4 oz. or less	496
4 lbs. 6 oz. or less	162
4 lbs. 15 oz. or less	60
5 lbs. 8 oz. or less	31
All babies of 5 lbs. 8 oz. or less	128

associated with any of these conditions. It appears from local studies that approximately 20 per cent of all premature births are associated with multiple pregnancy; 5 per cent with congenital malformations; 25 per cent with maternal toxæmia and hæmorrhage; and 50 per cent without any of these associations.

Other important statistical facts about prematurity are:

- (1) There are considerable local differences in incidence, which are not easy to explain.
- (2) Prematurity rates are especially high among first-born babies and where there have been several previous pregnancies. The incidence of prematurity has a marked social class gradient, being lowest for social classes I and II, and highest for social class V.
- (3) There is a high prematurity rate among illegitimate babies.

Peri-natal mortality and the physical and mental handicaps associated with prematurity will be reduced by the prevention of prematurity and by the expert post-natal management of the premature infant. Both approaches have received much attention in recent years.

A Standing Advisory Committee of the Ministry of Health made the following recommendations in 1961:

- (1) The establishment of a comprehensive scheme for the care of premature infants in each area.
- (2) The provision of special units in area specialist maternity departments.
- (3) A domiciliary premature baby service in each area.
- (4) Regular scrutiny of peri-natal deaths by maternity liaison committees in each area.
- (5) Selection of cases for hospital delivery and scrupulous ante-natal care for all pregnant women.

A Ministry of Health circular* makes the following recommendations about the care of premature infants.

* Circular 20/44, Ministry of Health, 1944.

When the mother and infant are kept at home special equipment should be lent by the local health authority, the supply of expressed breast milk arranged where necessary, and a home help should be provided. The care of the infant should be undertaken by a midwife with special training and experience. Separate bedrooms for the mother and infant are important.

It should be noted that special care can often be provided in the home by simple means. Especially important are to ensure that the infant is kept warm, for example, by hot-water bottles, and to ensure provision against exposing the infant to sources of infection.

When the birth takes place in a Maternity Hospital.

- (i) The provision of small wards at temperatures varying from 70 to 80 deg. F. with artificially increased and controlled humidity. The wards should have separate milk kitchens, ward kitchens and sanitary annexes for patients and staff.
- (ii) 10 beds for premature infants might be allocated for every 100 maternity beds.
- (iii) Skilled nursing staff is needed on a numerical basis of 1 nurse to $1\frac{1}{2}$ infants.
- (iv) A pædiatrician should be attached to all maternity units.
- (v) Specially designed institutional accommodation should be provided and the existing facilities might be reviewed.

Whether low-weight infants are cared for in hospital or at home, follow-up services are necessary to provide supervision and advice until the infant reaches the age of one year.

Congenital Abnormalities

A national scheme for the voluntary notification of congenital malformations has been in operation since the beginning of 1964. Notifications of abnormalities which are observable at birth are made by doctors and midwives to the Medical Officer of Health of the area. The local Medical Officer of Health then makes enquiries to establish a precise diagnosis and transmits the information to the General Register Officer. In this way, national statistics which show national trends and geographical variations in the incidence of malformations can be compiled.

The scheme, while providing valuable information not previously available, has an obvious limitation. Many defects of the heart, eyes and ears and less serious mental subnormality cannot be included because they are not evident at birth. To overcome this deficiency, the maintenance of live local registers in conjunction with "at risk" registers has been suggested to ensure that defects are as far as possible detected early and given appropriate supervision and care.

Recent surveys show that some 2.3 per cent of live and stillborn infants are malformed. Congenital malformations have, in fact, become one of the largest causes of infant death and sickness. As we have seen,

they account for 20 per cent of all infant deaths; and they are present in 20 per cent of stillbirths.

The commonest malformations are malformations of the central nervous system, mongolism, malformation of the heart, cleft palate and talipes.

With notable exceptions, insufficient is known of the causes of congenital defects for their prevention to be feasible. Advances in surgery have, however, made possible the correction of many for which there was no effective treatment until recently.

A clear distinction should be made between hereditary conditions and conditions present at birth, *i.e.* congenital malformations and abnormalities. In some instances congenital malformation is due to hereditary or chromosomal abnormalities; in other instances heredity and the environment of the unborn child both play a part, and in a few instances malformations are directly traceable to maternal infections, the use of drugs, or maternal irradiation during pregnancy.

Rubella, for instance, a mild febrile infectious disease, with virtually no serious complications, has a special significance for the pregnant woman because of the risk of congenital defects in their offspring. Women who acquire rubella in early pregnancy, *i.e.* within the first three or four months of pregnancy, may give birth to infants with congenital cataracts, heart disease, deaf mutism, and possibly certain other congenital defects. The magnitude of the risk appears to vary from place to place and time to time, but about one infant in ten born after maternal rubella during the first three months of pregnancy has a defect.

Thalidomide, given to woman during pregnancy affords a recent instance of the possible harmful effects of a drug on the developing embryo (see note in Appendix IX).

Most hereditary diseases cannot yet be controlled, but it is no longer true that all hereditary diseases are incurable. It is becoming increasingly possible to control the way in which unfavourable genes show themselves even though we cannot alter the genetic constitution with which an individual faces life. An example of this is the condition phenylketonuria, an inborn defect of metabolism, which, if untreated, leads to severe mental impairment. The early ascertainment of this condition by routine screening tests of the urine in early infancy (4-6 weeks) and the provision of a special diet for affected infants holds considerable promise of averting a condition formerly regarded as inevitable.

Genetic counselling is a service provided for parents who have already had a child with a serious malformation or other inborn disease and who want advice about the risk of a similar occurrence if they have another child. It is also available for persons suffering from serious hereditary diseases who are thinking of having a family.

Maternal Mortality

Unlike infant mortality, maternal mortality remained almost stationary from the beginning of the century until the mid-thirties. Since then it has fallen virtually without interruption to a fraction of its former level.

Table 9 shows that the maternal mortality rate, which was around 4 per thousand in the mid-thirties reached the low level of 0.20 per thousand in 1965. (Separate rates are calculated by the Registrar General for maternal deaths from pregnancy and childbirth and for deaths associated with pregnancy but due primarily to other causes. The latter and deaths from abortion are not included in the figures quoted in the Table.)

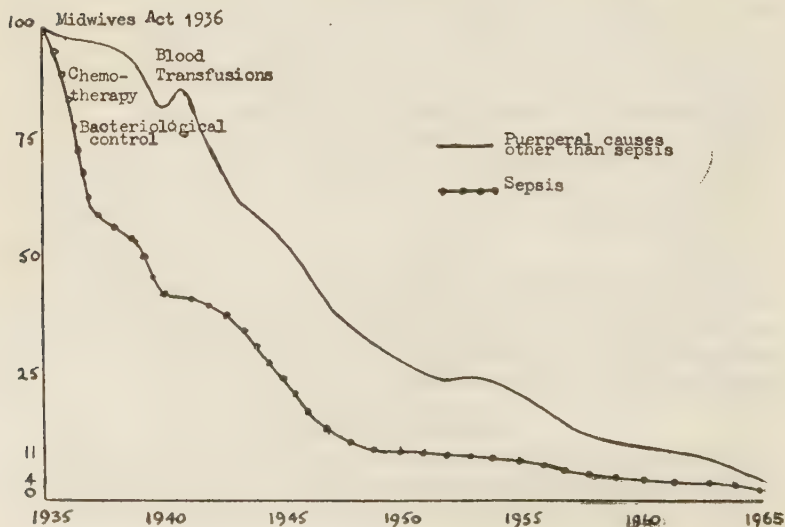
The Table also indicates that the proportion of deaths from septic causes fell from some 40 per cent before 1935 to 15 per cent in 1965. The same fact is illustrated in Fig. 15.

TABLE 9

SEPSIS AND MATERNAL MORTALITY IN RECENT YEARS (ENGLAND AND WALES)
DEATHS PER THOUSAND TOTAL BIRTHS

	<i>Septic Causes</i>	<i>Other puerperal causes</i>	<i>All puerperal causes</i>	<i>Approx. Percentage Sepsis of total</i>
1928	1.72	2.52	4.25	40
1934	1.95	2.47	4.41	44
1937	0.94	2.19	3.13	30
1941	0.83	1.96	2.80	30
1951	0.20	0.62	0.82	24
1957	0.11	0.36	0.47	23
1961	0.07	0.26	0.33	21
1965	0.03	0.17	0.20	15

MATERNAL MORTALITY FOR ENGLAND AND WALES
EXPRESSED AS A PERCENTAGE OF THE 1935 RATE
(Fig. 15)



The resistance of maternal mortality to improvement during the first 35 years of the century and the remarkable decline thereafter strongly suggest that improved living standards, wider education and better social conditions, though doubtless favourable influences, were not the main factors in bringing about the remarkable reduction shown. This conclusion is supported by a wealth of collateral evidence which points to the application of advances in medical knowledge in obstetrics, improved obstetric and midwifery practice and the development of a nation-wide maternity service as the main factors responsible.

In particular, the period since 1935 has witnessed the following developments and changes:

- (a) the general availability of blood and plasma transfusions;
- (b) the control of cross-infection in institutions by bacteriological services;
- (c) the introduction of chemo-therapeutic agents and antibiotics;
- (d) an increase in the proportion of women delivered in institutions (24 per cent in 1932; 70 per cent in 1964) and a more discriminating selection of women for hospital confinement.

Though it is not possible to estimate the precise contribution of individual factors, it is a near certainty that the reduction in maternal mortality which took place coincidently with these developments is mainly attributable to them.

However, the risk of death from child-bearing is now so small that the study of total mortality trends has greater relevance to describing past experience than to pointing the way to further reductions of mortality in the future. For this purpose it is more profitable to rely on detailed studies of the circumstances of individual maternal deaths and the single causes which contribute to the total maternal mortality.

In so doing, we are fortunate in having a series of official reports on enquiries into maternal deaths in England and Wales, the most recent of which (the fourth in the series) was published in 1966 (see p. 176). This report, like the earlier ones, relates to deaths which occurred during a three-year period, in the present instance to 1961-63. During this period, 816 deaths were certified as due to pregnancy and childbirth and of these, 692 were the subject of confidential reports to the Ministry of Health. 244 reports on deaths due to causes associated with pregnancy and childbirth were also received.

Table 10 on next page, reproduced from the Report, allocates maternal deaths for three 3-year periods to four major causes.

Table 11 shows that abortion and pulmonary embolism have now (1961-63) become important causes of maternal death. As a consequence, the proportion of deaths occurring in the early months of pregnancy is increasing, the majority being associated with procured abortion, ectopic pregnancy and pulmonary embolism, accounting together for one third of all deaths from pregnancy and childbirth.

Maternal heart disease is identified in the 1961-63 series as the most important cause of death associated with (*i.e.* not directly ascribable to) pregnancy.

TABLE 10
MAJOR CAUSES OF MATERNAL DEATH
(reference from the Ministry of Health Report cited in footnote)

	1955-57	1958-60	1961-63
Toxaemia	171	118	104
Haemorrhage	138	130	92
Abortion	141	135	139
Pulmonary embolism	147	132	129

* Ministry of Health. Reports on Public Health and Medical Subjects, No. 115. Report on confidential enquiries into maternal deaths in England and Wales, 1961-63. (H.M.S.O.)

Deaths in 1965 from a wider range of causes are listed below.

TABLE 11
DEATHS FROM PREGNANCY AND CHILDBIRTH
ENGLAND AND WALES, 1965

<i>Cause of death (excluding abortion)</i>	<i>Deaths</i>
Toxaemia of pregnancy	38
Puerperal phlebitis, thrombosis and pulmonary embolism	17
Other sepsis	5
Puerperal toxaemia	10
Haemorrhage	24
Ectopic pregnancy and other complications of pregnancy	26
Other deaths from delivery	44
Other complications of puerperium	5
Total (excluding abortion)	169
Deaths from abortion	
With sepsis 29 }	
other 23 }	52
Total	221

On the question of avoidable deaths, the Report gives details of avoidable factors attributed to each branch of the obstetric services and states that "Most avoidable factors occur in the ante-natal period" . . . and "Approximately one maternal death in four with avoidable factors (excluding abortion) was due to the patients' refusal to follow medical advice or refusal to be booked for the safest place for her confinement." 77 of the 121 deaths in this category were accounted for by procured abortion.

Avoidable factors were judged to be present in 37.9 per cent of deaths from pregnancy and childbirth (excluding abortion) and ectopic

pregnancy; and in 13·9 per cent of deaths associated with pregnancy and childbirth but due primarily to other causes.

The Report re-iterates that certain well-defined groups of women are at special risk of death during pregnancy and childbirth. Among them are:

- (1) Women with obstetric or general medical abnormalities.
- (2) Primigravida of 30 years of age or more.
- (3) Women of 35 years or more who are expecting their fifth or subsequent child, or who have a history of previous obstetric abnormality.

A conviction is stated that, small though the rate of death in pregnancy and child-bearing now is, it could be further reduced.

It is suggested (*inter alia*) that booking arrangements for the forthcoming confinement should be based on an agreed policy reached by a local maternity liaison committee in the light of the knowledge of special risk categories of women.

Summary of Factors Influencing Obstetric Mortality Rates

It is useful to classify the factors involved under the following headings:

1. Biological
 - (a) Age of mother at maternity.
 - (b) Order of pregnancy.
 - (c) Interval between pregnancies.
 - (d) Single or multiple pregnancy.
2. Social and economic
 - (a) Income level—to which are related diet and heating, etc.
 - (b) Housing—to which are related overcrowding and facilities for preparing feeds.
 - (c) Employment in industry of pregnant women and nursing mothers.
 - (d) Marital state—illegitimacy.
 - (e) Mode of life—which depends on the educational standard and traditional background, and to which are related self-care and child-care.
3. Medical
 - (a) Obstetric and paediatric skill.
 - (b) Availability of services—largely dependent on administrative arrangements.
 - (c) The state of technical medical knowledge—especially with reference to chemo-therapy, transfusions and bacteriologically controlled routine.

A. MEANS OF REDUCING INCIDENCE OF STILLBIRTHS

- (1) Attention to maternal diet and general health.
- (2) Ante-natal care directed specially to the control of toxæmia.
- (3) Skilled obstetrics.

B. MEANS OF REDUCING NEO-NATAL DEATHS

In addition to the above;

- (1) Care of the premature infant.
- (2) Care of the illegitimate infant and its mother.
- (3) Prompt treatment of respiratory infections.
- (4) The prevention of gastro-intestinal infections.

C. MEANS OF REDUCING PERI-NATAL MORTALITY—as for A and B above.**D. MEANS OF REDUCING POST-NEO-NATAL DEATHS**

- (1) Better education for parenthood, and other steps to improve infant care standards.
- (2) Measures to ensure that acute respiratory infections are promptly and effectively treated.

Population and Family Planning

The population of the world in 1900 was estimated to be 1,600 million. It is now over 3,000 million. That is to say it has doubled since 1900; and about half of the increase has taken place since 1940. World population has never grown so fast before, and the rate of growth is becoming even faster, so that by the end of the century the indications are that it will double again to at least 6,000 million. Most of the increase is taking place in the countries of Africa, Asia and Latin America, which are countries striving to improve their standards of living by planned economic and social development. When reference is made to the population problem or to population pressures in the world, it is mainly to the situation in the developing countries that reference is made, and mainly because it is feared that unless present trends are checked, food resources and economic developments will be outstripped by the needs of the soaring populations. Most people who have studied the problem believe that the only way to check over-rapid population and growth is to ensure that there are fewer births. All-out family planning drives have been widely advocated, and have been adopted as government policy in many countries of the world. This in essence, then, is what most people mean when they refer to the population problem.

Some years ago, the situation in Britain appeared to many to be the antithesis of the situation we have just described. Before the outbreak of World War II it seemed to many writers on demographic subjects that the population of Britain was about to decline catastrophically. Fears for the future found expression in the press and parliamentary debates, and later in the appointment in 1944 of a Royal Commission on Population to examine the facts and trends. As we shall see, these early forecasts have been falsified by events. The population of Britain has not fallen. On the contrary, it has increased without interruption; and the birthrate which reached a record low level in 1933 has risen to unexpectedly high levels in recent years.

Excluding immigration and emigration, which need not concern us here, a population grows because of the excess of births over deaths. For example, with a birth rate of 20 and a death rate of 10, the popu-

lation grows at the rate of 1 per cent per annum. The great reduction in the death rate which occurred during the last century and has been maintained since is well known and need not detain us. Our concern is rather with the factors which decide the flow of births. Disregarding illegitimate births to simplify the argument, the main factors are:

- (i) the number of women who marry;
- (ii) the age at which they marry;
- (iii) the overall number of children per marriage;
- (iv) the way in which the births are spaced, *i.e.* whether most children are born within a few years of marriage or spread over a long period.

On the basis of what is known of these elements, estimates of the likely number of births for future years are made—or projections, as they are sometimes called. It is now estimated that by 1975 there will be 891,000 live births as compared with 839,000 for 1962. The projection is made on the assumption that the existing trend will continue, a question on which there is necessarily some uncertainty. At the present time marriage rates are high, the average age of marriage is falling, the average completed family size for the 1946–50 marriages looks like being 2.2–2.3. Birth-spacing attributable to widespread family planning is also an important feature of the situation.

In addition to completed family size, another index of fertility, known as the net reproduction rate, has been used. The principle underlying this rate is that for an age-stable population to maintain itself, every woman of childbearing age has to be replaced by a woman of childbearing age in each succeeding generation, *i.e.* a net reproduction rate of unity (1.0). When the rate is less than unity something less than replacement is spelled, and when over unity something more than replacement. Between 1933 and 1945 the net reproduction rate for England and Wales was less than unity, reaching the lowest record level (0.737) in 1941, to rise to a level above unity in the immediate post-war years.

The value of forecasts of annual births will be apparent. It is needed for estimating the future requirements of obstetrics and midwifery services, and for estimating educational requirements as the survivors of the babies born reach school-age and so forth. Forecasts of birth rates and death rates in conjunction are also the basis of estimates of the future size and age structure of the population. It is estimated, for instance, that by 1975, if present rates are maintained, the proportion of the population in the age group 0–14 years will be almost 25 per cent, and that there will be 7 million persons of 65 years and over, a fact which must be taken into account in the planning of geriatric care.

In this context two conclusions of the Royal Commission are of considerable interest.

- (1) The remarkable decline in the size of families since the middle of the last century. Married women born between 1840–1860 had on an average between five and six children, whereas women married between 1925 and 1929 had on the average 2.2

children. In effect, the one-child and two-child family has been substituted for the family of five, six or seven.

- (2) There are no biological or physiological reasons why married couples cannot have large families if they wish. In other words, the present small family is immediately attributable to the widespread use of deliberate methods of family limitation.

The Commission recommended the provision of facilities for the study and treatment of involuntary childlessness and for giving advice on birth control to all married couples who want it; these provisions to be made as part of the National Health Service.

Family Planning—the present situation

In Britain, there is no national population policy in the sense that acceptable rates of expansion have been defined. Family planning is, however, sufficiently widespread to keep the rate of population growth within acceptable limits. Family planning and birth control are advocated in Britain primarily on grounds of health and family welfare and not on grounds of demographic policy, *i.e.* they are designed to meet the wishes and medical needs of individual couples.

Contraceptive advice for married women for whom a further pregnancy would be detrimental to health has been provided for many years under the National Health Service Act, and in 1964 earlier provisions were enlarged when the Ministry of Health authorised the issue of prescriptions under the National Health Service for oral contraceptives if the doctor is satisfied that the patient's health would be endangered by pregnancy and that oral contraceptives are necessary to prevent this. The responsibility for giving contraceptive advice is shared between local health authorities and regional hospital boards. Local health authorities are empowered to establish their own contraceptive clinics and to contribute to voluntary organisations which run family planning clinics. Regional hospital boards normally provide contraceptive advice in gynaecological departments of hospitals.

Both local health authorities and regional hospital boards co-operate extensively with the Family Planning Association, a voluntary association which has London headquarters and some 50 provincial branches. At the present time, the Association has over 500 Family Planning Clinics, most of which are on local authority premises. Co-operation between the Family Planning Association and local authorities is a noteworthy feature of family planning in Britain.

For a full account of birth control methods, the reader is referred to publications devoted to the subject. For the general reader's convenience, a short account of contraceptive methods is given in Appendix I.

Appendix I

NOTE ON BIRTH CONTROL METHODS

Birth control methods comprise: induced abortion, and methods for controlling ovulation, fertilisation, and nidation, *i.e.*

- (1) surgical sterilisation;
- (2) coitus interruptus;
- (3) the use of mechanical barriers such as the cervical cap and the condom (sheath) either alone or with foam preparations;
- (4) dependence on the "safe period" or "rhythm method";
- (5) the use of oral contraceptives (pill method)
- (6) the use of intra-uterine devices.

Nothing need be said about the induction of abortion as a method of birth control since it is nowhere recommended as a method of family planning. It is unacceptable in Britain on ethical grounds and because of the possible serious effects on maternal health.

Surgical sterilisation is undertaken in Britain only on strict medical indications.

Of coitus interruptus, it is sufficient to say that this has probably been the method mainly responsible for the relatively low rate of population growth of Western European countries during the last quarter of a century.

The condom and the cap likewise require little comment. While the condom is a safe method for the individual, it is aesthetically unacceptable to many couples. The failure rate when the condom is properly used has been estimated at $2\frac{1}{2}$ pregnancies per 100 woman-years of exposure.

The diaphragm (Dutch cap) is less safe than the condom and is now little used. This applies also to the cervical cap which has the additional disadvantage of introducing a risk of local irritation.

The rhythm method, oral gestogens and intra-uterine devices are commented on below.

THE RHYTHM METHOD (or abstinence)

This is the only method at present approved by the Roman Catholic Church. The basis of the method is to restrict intercourse to the infertile days of the menstrual cycle, or putting it the other way about to avoid intercourse during the period when the ovum might be fertilised.

A safe or infertile period can be identified because the ovum remains viable for only 8 to 12 hours after release, and sperms for a period of some 24 hours (3 days according to some estimates). It follows from these facts that if intercourse is avoided for 3 days before ovulation and for 12 hours after ovulation, pregnancy cannot occur. Unfortunately, the date of ovulation cannot be estimated precisely. The most probable period of the cycle for ovulation to occur is 16 to 12 days (inclusive) before the beginning of the next menstrual period, a date which can be foreseen only for women whose menstrual cycles are regular. For these women the formula usually recommended is to avoid intercourse during 9 fertile days consisting of the 5 days of

probable ovulation, the next following day during which the ovum remains viable and the preceding 3 days during which viable sperms may be present in the female genital tract.

For many women, there is no calculable consistent safe period by the calendar method because of the occasional irregularity of their periods.

An alternative method of identifying the period during which ovulation occurs is referred to as the "temperature method". It depends on the fact that the basal body temperature rises by half to one degree Fahrenheit shortly after ovulation and remains elevated for a few days. To identify this event, the woman should take her temperature by mouth or rectum before she gets up in the morning and should plot a daily temperature chart. Clearly, the method does not identify the first fertile day since it indicates the time of ovulation only after the event. The employment of the rhythm method has been estimated to reduce pregnancies in a population by about one fourth or one third.

ORAL CONTRACEPTIVES

The method which is at present generally available is one in which the woman takes pills to prevent ovulation. The pills contain a mixture of hormones (gestrogens) which act by inhibiting gonadal pituitary activity. Synthetic gestrogens are now available, which though only 1/1000 the strength of the natural hormone, effectively inhibit pituitary activity so as to prevent ovulation.

To suppress ovulation, the woman has to take one pill a day for 20 days of each menstrual cycle commencing on the 5th day from the beginning of the last period, or one day after the last period ends. Protection is essentially complete for as long as the method is practised. Statistically, the pregnancy rate for women adhering strictly to the method is less than 1 per 100 woman-years of exposure. Women who have taken pills for a period of years and who remain within reproductive age can become pregnant within a few months of ceasing to take them.

Side effects of the pill include breast turgidity, headaches, nausea and breakthrough uterine bleeding. These effects are less common after taking the pills for four or five cycles but some 15 per cent of women cannot tolerate oral contraceptives. The long-term risks from oral contraceptives must remain to some extent a matter for conjecture. There is, however, no evidence thus far that they are carcogenic or otherwise harmful. Thrombophlebitis and certain liver diseases are regarded as contra-indications to the prescription of this method.

The method requires medical supervision and is at present somewhat expensive.

INTRA-UTERINE DEVICES

The intra-uterine device (I.U.D.) which is coming into use increasingly in some countries, takes the form of a double loop, spiral coil or ring made of metal or plastic. The device is laterally compressed or extended as the case may be to insert it into the uterine cavity where it again assumes its original shape. Insertion takes only a few minutes and

it is thought by some that it can be done safely by a midwife or other non-medical attendant who has suitable training.

About 14 per cent of the devices are expelled spontaneously occasionally without the woman being aware that this has occurred. After re-insertion 90-95 per cent can be retained indefinitely. The same device can be retained during the entire span of a woman's reproductive years. About one woman in ten has to have the device removed because of pain, bleeding or other manifestation of intolerance, and uterine perforation is not unknown.

The effectiveness of the I.U.D. as a birth-control device approaches 100 per cent. It is estimated that with these devices there are two pregnancies for 100 woman-years of exposure.

The precise mode of action of the I.U.D. is not known. It is uncertain whether the device operates by accelerating the passage of the ovum along the Fallopian tube and in the uterine cavity so that, as a consequence, it is not ripe for fertilisation, or whether on the other hand it prevents nidation of the fertilised egg. The question is perhaps of greater importance to the theologian and the bio-medical scientist than to the family planner.

Appendix II

CYTOLOGICAL SCREENING FOR CARCINOMA OF THE CERVIX UTERI AND SCREENING PROCEDURES IN GENERAL

There are at present some 2,500 deaths a year in England and Wales from cancer of the cervix, mainly to women over the age of 35 years. The invasive disease is preceded by an *in situ* lesion which develops without symptoms over a period of three to five years. There is strong evidence for the value of diagnosis at the earlier non-invasive stage. The earlier the diagnosis, the better is the survival rate. Early diagnosis can be made by the cytological examination of a cervical smear which is relatively easy to prepare and which can be reliably assessed in a pathological laboratory by pathologists and medical laboratory technicians trained in cytology.

On the basis of these facts, a national scheme for screening women for the condition has been established. For the present, attention is focussed on women over 35 years of age, and screening is done at intervals of five years. In order to screen all women over 35 every five years, some 2,500,000 examinations a year would have to be performed. Although the scheme is still in its early days a substantial proportion of women at risk are already being tested. The annual rate of screening has now (December, 1965) reached over 750,000, and screening has started throughout the country.

Smears are taken in hospital clinics from women attending gynaecological and obstetric departments. For women who are not hospital patients smears are taken at local health authority clinics, by general practitioners, and at voluntary family planning clinics.

Cytological kits, comprising a spatula, slides, slide container and fixatives, are supplied by hospital authorities. Smears are taken by a doctor or a trained nurse working under medical supervision, and are dispatched to a hospital laboratory for examination and report. A standardised recording system enables follow-up and re-call to be effected. Women from whom a smear has been taken are notified of the result and advised to consult their general practitioner if the smear is positive or doubtful. The general practitioner is responsible for referring patients with positive or doubtful smears to a hospital department of gynaecology, and for follow-up.

Screening services are planned jointly by hospital authorities, Executive Councils, Local Medical Committees, and Local Health Authorities. Other interested bodies are kept informed. General publicity for the scheme is the responsibility of local health authorities, but a personal approach by the general practitioner, the health visitor, and the midwife is particularly valuable in reaching women who are unlikely to respond to general publicity methods. Women in high risk groups who cannot be persuaded to attend a clinic can have a smear taken in their homes by home nurses.

Screening for cancer of the cervix is a personal preventive service. It is an example of "secondary prevention".

THE EARLY DETECTION OF DISEASE AND SCREENING PROCEDURES

With notable exceptions, *e.g.* the periodic examination of school children, the medical supervision of the pregnant woman, the health surveillance of certain occupational groups and the "medical check-up" for a privileged few—medical care is given for the most part to persons who consult a doctor because they are sick. This method of distributing diagnostic and treatment services is adequate for meeting many medical care needs, but clearly insufficient to provide medical care for all who could benefit from it.

Disregarding persons who, though aware that something is amiss with them fail for one reason or another to seek medical advice, the usual method of obtaining medical care fails to secure it for two categories of patient:

- (1) Persons with undeclared, or pre-symptomatic disease which they are, therefore, unaware of, but which might be discovered by the physician, *e.g.* cancer of the cervix uteri, early diabetes.
- (2) Persons, who though not ill, might be at special risk of developing certain diseases and who might benefit from advice about how to reduce the risk. Advice of this kind would, so to speak, be a tailor-made prescription for personal conduct which took account of the individual's proneness to certain diseases, his habits, environment and so forth.

To provide medical care for these groups requires that it should be offered and delivered to them without their having to take the initiative in seeking advice because they are sick.

Alternative ways of reaching them are through the use of screening procedures and by means of periodic medical examinations. The expression "Early detection" is used to include all forms of early disease discovery by screening tests, physical examination and other means.

By screening procedures is meant the application of tests or examinations to sort people into two categories:

- (1) Those without evidence of early or established disease and who can be reassured without further examination.
- (2) Those who either have a disease and need treatment or who need clinical assessment to decide the issue (borderline cases).

When screening tests are used for the whole population or for large groups to identify undeclared disease or defect, the procedure is called "mass screening".

When used for a "high risk" group in the population, it is known as "selective screening", *e.g.* for pregnant women, infants, occupational groups, old people.

The use of a battery of tests in combination is called "multiple screening".

The degree of reliability of a test to detect disease whenever it is present, and to miss little, is known as "sensitivity". Reliability to indicate disease only when it is present, *i.e.* not to give false positive results, is called "specificity".

Screening tests are used for two somewhat different purposes:

- (1) They are used in epidemiological surveys, when the object is to elucidate the prevalence, distribution and natural history of a disease, or the distribution in the community of the level of a variable character such as blood pressure or blood-sugar concentration.
- (2) For case-finding, when the main object is the detection of disease for the purpose of bringing the patient to treatment. The health worker is mainly interested in this use of screening tests.

Early case-finding by screening is feasible when two criteria are satisfied. First, there has to be a suitable test, *i.e.* one which is sufficiently sensitive and specific, relatively simple to perform and acceptable to those for whom it is intended. Secondly, the disease it is used to detect should have a recognisable latent, or early, declared stage.

To justify the routine application of a screening test for case-finding, two additional requirements have to be fulfilled, *i.e.* first there should be an effective treatment for the disease in question, and secondly the medical-care services should be capable of treating the volume of cases discovered.

As a rule, mass screening is only worth while for diseases which are fairly common, *e.g.* respiratory tuberculosis. It is also worth while, however, for diseases, which though rare, are attended by grave consequences unless they are detected and controlled at an early stage, *e.g.* phenylketonuria. A decision to employ mass screening is taken therefore by balancing the probable yield of cases and the gravity of a condition against the labour and cost involved.

Screening tests in common use include serology, clinical procedures such as blood pressure estimation and urine analysis, special examinations such as tuberculin testing, chest X-ray, E.C.G., cervical cytology and the use of questionnaires. The questionnaire, which is either completed by the patient himself or by a professional attendant at interview, is used especially in screening for mental disorders. For this purpose it usually includes questions about:

- (1) disturbances of feeling, thought and behaviour,
- (2) social relations,
- (3) school or work performance, and
- (4) physical functions such as sleep, eating, motor impairment, enuresis and habit spasms.

Established screening practices for infants, pregnant women and the elderly have been referred to in earlier chapters. A comment on screening for cervical cancer has already been made.

Screening procedures for many chronic diseases of middle life—chronic bronchitis, ischaemic heart disease, hypertension, chronic glaucoma and unreported mental illness are at present under investigation. Before mass screening for these conditions can be offered, there are difficult problems to be solved. This is especially true of mental illness because diagnostic criteria for these disorders are ill-

defined and the value of alternative forms of treatment are hard to assess.

The automation of laboratory procedures, the use of questionnaires and electronic methods of data handling promise to widen the practicable scope of mass screening in the future.

Appendix III

REGISTRATION AND SUPERVISION OF NURSING HOMES

The registration and supervision of nursing homes are governed by the Public Health Act, 1936, and the Nursing Homes Act, 1963. A nursing home is defined as any premises for the reception and nursing of sick, injured or infirm persons and includes a maternity home, but does not include:

- (a) any hospital or premises controlled by a Government department, local authority or other statutory body;
- (b) any institution for persons of unsound mind; or
- (c) any institution or home for mental defectives approved by the Board of Control.

County councils and county borough councils are responsible for administering the law relating to nursing homes.

A person wishing to carry on a nursing home must apply to the council for registration, enclosing a fee of 5s. The council may refuse registration, or cancel a registration, on the grounds that the applicant is not a fit person, the premises are unsuitable, the staffing or equipment is unsatisfactory, the person in charge is not a resident doctor, a resident qualified nurse or certified midwife, or that the home is used or proposed to be used for improper or undesirable purposes.

If the Council decide to make an order refusing or cancelling a registration, they must give fourteen days' notice to the person concerned and the opportunity of appearing before them to show cause why the order should not be made. Any person aggrieved by such an order may appeal to a court of summary jurisdiction.

The certificate of registration issued in respect of a nursing home must be kept affixed in a conspicuous place in the home.

The council may make bylaws prescribing the records to be kept of patients admitted to a nursing home, and in the case of a maternity home of births and miscarriages which occur there. They may also prescribe the notices to be given when a death occurs in a nursing home. The Council's Medical Officer of Health, or some other authorised officer, may enter and inspect the premises and records at all reasonable times. He has no authority to inspect medical records.

The main objects of these provisions is to prevent the owners of nursing homes run for profit from endangering the health and safety of patients by the use of unsuitable premises, inadequate equipment and unqualified staff, and from allowing illegal operations or other undesirable practices.

It is usual for registration authorities to provide for the information of persons conducting or intending to open nursing homes a statement of requirements for their guidance. Regard is had to structure, sanitary arrangements, fire protection, equipment and staff. The authority usually carries out an inspection of the sanitary arrangements through a public health inspector and asks the Chief Officer of the Fire Fighting Service to inspect the premises in relation to fire protection and to advise.

The Nursing Homes Regulations, 1963, require that the managers of a registered nursing home shall give attention to the following matters:

- (a) provide for each patient efficient nursing care and for this purpose employ by day and night suitably qualified and competent staff in numbers which are adequate having regard to the size of the home and the number and condition of the patients received there;
- (b) provide for each patient in the home by day and by night reasonable accommodation and space having regard to the age, sex and condition of the patient, including the nature and degree of any illness or disability from which he is suffering;
- (c) provide adequate and suitable furniture, bedding, curtains and, where necessary, suitable screens and floor covering in rooms occupied or used by patients;
- (d) provide appropriate and suitable medical and nursing equipment and treatment facilities, having regard to the condition of the patients received there;
- (e) provide for the use of patients a sufficient number of wash-basins and baths fitted with a hot and cold water supply, a sufficient number of water-closets and any necessary sluicing facilities;
- (f) provide adequate light, heating and ventilation in all parts of the home occupied or used by patients;
- (g) keep all parts of the home occupied or used by patients in good structural repair, clean and reasonably decorated;
- (h) take adequate precautions against the risk of fire and accident, having regard in particular to the condition of such patients as are received there;
- (i) provide sufficient and suitable kitchen equipment, crockery and cutlery, together with adequate facilities for the preparation and storage of food;
- (j) supply adequate, suitable and properly prepared food for every patient;
- (k) arrange for the regular laundering of linen and articles of clothing;
- (l) make suitable arrangements for the disposal of soiled dressings and other similar articles;
- (m) arrange as may be necessary for the provision for any patient of medical and dental services, whether under Part IV of the National Health Service Act, 1946, or otherwise;
- (n) make suitable arrangements for the safe keeping and handling of drugs;
- (o) permit officers authorised in that behalf by the registration authority to interview in private any person received into the home.

The regulations empower the registration authority to limit the number of persons in a nursing home and also prescribe offences and penalties (fines and the cancellation of registration).

Matters requiring special attention in the case of maternity homes include:*

- (1) *Staff.* As a guide, two day nurses and one night nurse will be required for every six patients, or generally for greater numbers a staff to patients ratio of 1:2. At least one night nurse must be on duty whenever there are four or more patients in the home and an additional night nurse will be required when the number in the home is eight or more.
- (2) If two or more maternity cases are accommodated in one room a separate labour room is required.
- (3) For larger maternity homes an isolation room is needed.
- (4) Rooms used for maternity nursing should be on the same floor as sanitary arrangements.
- (5) Approximately 1,000 cubic feet of space is needed per bed for rooms accommodating mothers and infants.

* This note is intended only as a general guide, *i.e.* it is not a part of the regulations referred to.

Appendix IV

MENTAL DISORDER AND MENTAL SUBNORMALITY

Reference has already been made to the Mental Health Services and the wider implications of the Mental Health Act, 1959 (see p. 72).

We shall here consider briefly some of the characteristics of mental disorder and mental subnormality and the medical and social problems to which they give rise, mentioning in particular the mental disorders associated with child-bearing and the puerperium.

MENTAL DISORDER

It is by no means easy to define physical health and disease but it is far more difficult to formulate satisfactory definitions of the concepts of mental health and mental illness.

Philosophical considerations apart, it is, however, clear that in any definition of mental illness, the notion of "adjustment" is invoked. It is equally clear that normal adjustment varies greatly from person to person, from one situation or cultural setting to another, and for the same person at different periods of his life. To take a concrete illustration, a clergyman who began to use the descriptive epithets of the bargee of fiction would be regarded as mentally disordered—and so would the bargee who expressed himself in the language of the pulpit. A somewhat different way of putting the matter is to say that our assessment of mind is based on behaviour. Included within this term are not only the complex reactions of an individual to family and other social situations, but also speech and other modes of human communication, and personality and character manifestations which are aspects of overt behaviour.

Relatively little is known about the causes or etiology of most mental illnesses, though it is generally agreed that like many physical ailments, mental illness usually has a multiple etiology, *i.e.* many different causes contribute jointly to its occurrence and characteristic forms. In a few instances we can point to specific causes or factors, as, for example, in the inherited defects in enzyme systems such as phenylketonuria, or the adverse effects of prolonged sensory deprivation, social isolation and the early disruption of the mother-infant relationship.

A distinction implicit in the title of this section should now be explained, namely the distinction between mental disorder and mental subnormality. Broadly, the former refers to disturbances of the developed mind; and the latter to a slow or arrested development of the mind during the growing period.

A wholly satisfactory classification of mental disorders has not yet been achieved, nor is there a sharp dividing line between mental changes which are secondary to physical disease and disorders which in the present state of knowledge have to be regarded as primarily mental in character. Some mental disorders are associated with such physical conditions as cerebral tumours, toxic states and endocrine disturbances, but many have no recognised physical basis to account

for them. It will be remembered moreover that most changes in the physical state of the body are accompanied by mental changes of greater or less degree. The depression of jaundice, the euphoria of advanced phthisis, the minor disturbances of pregnancy and the effects of alcohol and drugs are well-known instances. In general, personality changes in mental disorders are of longer duration and more profound than the changes usually associated with physical disease.

For many purposes it is useful to distinguish between less serious disorders (psycho-neuroses) and graver disorders (psychoses). There is no sharp dividing line between them, but broadly the psychoses are distinguished by more profound changes in personality and behaviour, and by the absence of insight, *i.e.* the inability of the psychotic person to recognise that he is ill.

As we have already seen (see p. 30), the current practice is to treat mental disorders as far as possible in the same way as physical disorders, though in some cases special safeguards are necessary. If, for instance, a patient persistently refuses food, tries to take his own life, becomes violent, or has delusions accompanied by grossly perverted conduct, then an element of protective custody has to accompany treatment.

MENTAL HEALTH AND PREGNANCY

It is common knowledge that the pregnant woman often tends to have greater ups and downs and more fluid emotions than usual; and in some instances anxiety states and compulsion neuroses develop during pregnancy. These conditions require sympathetic handling but they are rarely serious and usually clear up without heroic treatment. True psychoses of pregnancy are rare, and pregnancy is not now regarded as a common trigger factor in the etiology of schizophrenia and other major mental disorders.

The commonest mental disorder associated with child-bearing is the depressed state of late pregnancy and the puerperium. The condition may last weeks or months and is sometimes characterised by confusion, disorientation and depersonalisation alongside the depression. With proper treatment the prognosis is favourable. The causes of puerperal depression have not been identified with certainty but the evidences suggest that they are ascribable to a combination of disturbed endocrine balance, exhaustion and psycho-dynamic factors. As a rule, the patient can be treated at home aided by modern tranquillisers and remain ambulatory and reasonably active. If she has to be admitted to hospital, admission of the child as well is generally preferred.

Breast feeding can normally be continued safely, bearing in mind that where there are signs of an aggressive attitude towards the infant, special precautions may be necessary.

Midwives and health visitors will not be expected to make a diagnosis of mental disorder, but it is well for them to keep in mind the services available under the Mental Health Act and to be on the look-out for early symptoms such as insomnia, anorexia, restlessness, delusions and other strange ideas.

MENTAL SUBNORMALITY AND INTELLIGENCE

When, as sometimes happens, mental development is unduly slow or arrested prematurely we say (in the absence of factors such as sensory defects or deprivation of educational opportunities) that there is a state of mental subnormality. The mentally subnormal baby is late in walking, talking and developing clean habits. The subnormal school child is backward with lessons. The subnormal adult is unable to hold down the humblest job and to manage his own affairs.

Mental subnormality is sometimes associated with well defined physical characteristics. Mongolism, amaurotic idiocy and microcephaly are examples. Most mentally subnormal persons, however, are persons who are excessively dull or of low intelligence.

For the present purpose intelligence can be regarded as the capacity to profit by experience—or to learn, whether in ordinary day-to-day life or in the more restricted sense of formal education. Without a certain level of intelligence a child cannot make satisfactory progress with his lessons and the adult cannot adapt himself effectively to social and other situations, though, of course, in neither case is intelligence the only relevant attribute. Character and personality, adequate sight and hearing and bodily vigour, for instance, are obvious partners in the situation.

It is common knowledge that some people are more intelligent than others; or as we say, human intelligence has a wide range of variability.

Tests, known as “intelligence tests”, have been devised for grading general ability. They are especially useful during childhood and adolescence, but less reliable in later years.

In everyday language, as we have stated, intelligence means the capacity to learn and adapt. Quantitatively, intelligence is that which is measured by intelligence tests. The tests are standardised for each year of age up to sixteen and the result expressed as an Intelligence Quotient (I.Q.), *i.e.* the ratio of the mental age as shown by the tests to the actual or chronological age, expressed as a percentage, *i.e.*

$$\text{I.Q.} = \frac{\text{Mental Age}}{\text{Actual Age}} \times 100$$

The child whose I.Q. is 100 is “average” or “normal”; the child whose I.Q. is less than 90 or so is dull; the child whose I.Q. is above 120 is bright.

The Mental Health Act, 1959, distinguishes “severe subnormality” and “subnormality” in the following terms:

“‘Severe subnormality’ means a state of arrested or incomplete development of mind which includes subnormality of intelligence and is of such a nature or degree that the patient is incapable of living an independent life, or of guarding himself against serious exploitation, or will be so incapable when of an age to do so.

“‘Subnormality’ means a state of arrested or incomplete development of mind (not amounting to severe subnormality) which includes subnormality of intelligence and is of a nature or degree which

requires or is susceptible to medical treatment or other special care or training of the patient."

"Psychopathic disorder" is defined by the Act as a persistent disorder or disability of mind (whether or not accompanied by subnormality of intelligence) which results in abnormally aggressive or seriously irresponsible conduct on the part of the patient and requires, or is susceptible to, medical treatment.

Although the diagnosis of subnormality must always depend on a thorough-going assessment of educability and general behaviour (and the exclusion of factors other than a defect of mind as responsible cause, *e.g.* sensory defects and educational deprivation), the intelligence quotient is generally a valuable index.

The Councils of Counties and County Boroughs have the duty of ascertaining subnormal persons in their area and, when necessary, of arranging for their care. Not every mentally subnormal person requires care in this sense. Of those who do, many are adequately provided for in their own homes. Only a small proportion of mentally subnormal persons require institutional care.

Appendix V

BREAST-FEEDING AND SUDDEN DEATH IN INFANCY

Breast-feeding has been widely advocated on the grounds that it is safer than artificial feeding and that breast milk is, by and large, the most suitable food for infants. Few would dispute that this is true in many developing countries where breast-feeding is still the rule, and equally so for badly-off or unfavourably situated population groups wherever they may be.

It is clear, however, that arguments advanced in favour of breast-feeding within the well-to-do and enlightened strata of highly-developed communities are often based on opinion rather than verified fact.

Many investigations have been undertaken of the duration of breast-feeding in different social groups and families of different sizes, the reasons for failure to establish or continue breast-feeding, and the growth and sickness experience of bottle-fed infants as compared with infants fed at the breast. Almost without exception, however, the investigations have been in small areas, and not country-wide, or in special groups such as infants in nurseries or attending infant welfare centres. A national survey published in 1948* is an exception but cannot, of course, be assumed not to be outdated after the passage of almost twenty years.

From such information as exists it is probably safe to say that breast-feeding has declined since 1948, and in some sections of the community has become the exception rather than the rule. It would appear from such evidence as is available that about one fifth or one quarter of mothers either fail to establish breast-feeding altogether, or do not continue to breast-feed their infants for more than ten days, and that only a small proportion of infants are still breast-fed either wholly or partially at the age of six months. As to the relationship between breast-feeding and infant health and well-being, it has been shown that the breast-fed infant is less likely to have gastro-intestinal disorders and infective enteritis in hygienically adverse conditions, but it is doubtful if this holds good in the best conditions of modern urban life.

Inability to lactate satisfactorily has probably been a factor of relatively little importance in the decline of breast-feeding. The main contributing circumstances have been social and psychological rather than physiological in character. Anxiety, pressure of housework, maternal ill-health, and maternal employment are far more commonly causes of failure than physiological incapacity, mastitis, and other more medical conditions. It is also certain that the prevailing social attitude towards breast-feeding is an important factor. Women are more likely to breast-feed their babies in a society where it is considered the right thing to do than in a society which is indifferent or hostile to the practice in a social or aesthetic sense.

* "Maternity in Great Britain", Oxford University Press.

SUDDEN DEATH IN INFANCY

A considerable proportion of infant mortality from 2 weeks onwards is ascribable to "sudden death", a problem which has been the subject of recent enquiries. It has been concluded that many of the deaths are probably due to upper respiratory infection, pneumonia or accidental mechanical suffocation including the inhalation of food or vomit.

A category of "unexplained deaths" is also distinguished. This group has a peak incidence at 2-3 months, a Winter excess, symptoms of respiratory illness in the two weeks before death and a more frequent use of soft pillows than in a control group. The cases generally come from poorer homes, the mothers are younger and a higher proportion are illegitimate than for controls. Hypersensitivity to cow's milk associated with early bottle feeding also appears to be a factor of importance.

The avoidance of soft pillows and complete breast feeding for the first two weeks of life are among the measures recommended to prevent the occurrence of sudden unexplained deaths in infancy.*

* Report of an Enquiry into Sudden Deaths in Infancy (Ministry of Health, 1965).

Appendix VI

THE EMPLOYMENT OF WOMEN IN INDUSTRY

The protection of pregnant women in industry is a social measure with a bearing on the health of a section of the community in which the midwife is particularly interested. It is, therefore, instructive to compare certain recommendations made by the Royal College of Obstetricians and Gynæcologists in relation to this subject with the existing law—recommendations embodying in a practical form the point of view of social medicine outlined in an earlier chapter. The following quotation is taken from a Report on a National Maternity Service (reference p. 201).

“THE MOTHER IN INDUSTRY: We would like to stress one point, however, namely, that the expectant and nursing mother must have protection from undue stress, both physical and mental, during pregnancy and six months after parturition. It need hardly be emphasised that the mother is the most important influence for good or evil in the family circle. Not only the physical health, but the psychological health of the young child will depend on the atmosphere in the home and the feeling of security that the child experiences in having a reliable and loving parent to whom he can turn with confidence and trust. This relationship begins ideally with successful lactation. DURING THE LAST THREE MONTHS OF PREGNANCY AND THE FIRST SIX MONTHS AFTER PARTURITION, THE MOTHER SHOULD BE FREE FROM ALL OUTSIDE RESPONSIBILITY WHICH MIGHT INTERFERE WITH PREGNANCY AND LACTATION. WE BELIEVE THE ABOVE PRECAUTIONS TO BE MINIMAL.

“The economic position of large numbers of expectant mothers is such that they are forced to go out to work to ease their financial worries and often continue right up to the time of labour, although in many cases, owing to its casual nature, the work is often hard, poorly paid and quite unsuitable. The earlier in pregnancy they are compelled to stop work, the more serious is the financial loss, as the family income falls just when money is needed for extra medical and nursing expenses and domestic help. Many a mother spends a day or two before the expected date of the confinement cleaning and washing to tide over the time when she will be unable to be out and about. Obstetricians find that many seriously ill women will insist on going home from hospital before their treatment has been completed because of the anxiety about what is happening at home. UNLESS SOME REALLY FUNDAMENTAL STEPS ARE TAKEN TO EASE THE LOT OF MANY EXPECTANT MOTHERS IT IS DIFFICULT TO OBJECT EFFECTIVELY TO THEIR TAKING OUTSIDE WORK. In fact, the extra money available for food and other necessities may well improve the mother's health. The plight of many unmarried mothers when unable to work may account in part for the high maternal mortality and stillbirth rates associated with illegitimate births, despite the fact that the women are usually young.”

The employment of pregnant women is not prohibited by law. The law making it an offence to employ a nursing mother in industry

is contained in the Public Health Act, 1936, s. 205, which reads as follows:

“If the occupier of a factory or workshop knowingly allows a woman to be employed therein within four weeks after she has given birth to a child he shall be liable to a fine not exceeding five pounds or, if he has been previously convicted of a like offence within two years, to a fine not exceeding ten pounds.”

Social Security provisions (p. 57) in connection with child-bearing afford evidence that the State has gone some way towards relieving the economic position of the less fortunate child-bearing women; but the gap between these provisions and the “fundamental steps” recommended in the Report of the Royal College of Obstetricians and Gynæcologists speaks for itself.

Appendix VII

THE LAW RELATING TO ABORTION

Abortion is the emptying of a pregnant uterus at any time up to the twenty-eighth week of pregnancy.

It has been estimated that about one pregnancy in every three or four terminates by abortion, and that many thousands of abortions are criminally induced every year.

Physicians and other health personnel are interested especially in the dangers to life and health associated with abortion. The state is interested in the loss of potential citizens, and society in the ethical code and social structure within which abortion is so widespread. The law is concerned with abortion as a criminal offence, which is only rarely brought to trial and more rarely prosecuted to conviction.

A spontaneous abortion is one which occurs naturally as a result of accident or disease.

A criminal abortion is one unlawfully and deliberately procured.

A therapeutic abortion is one honestly procured for the purpose of saving life or preserving health.

Unless the interference is sanctioned by law, an artificial emptying of, or attempts to empty, the uterus is a crime. The law on the subject makes it a crime:

- (a) For a pregnant woman,
unlawfully,
to take any poison or use any instrument or other means, with intent to cause her own miscarriage.
- (b) For anybody,
unlawfully,
to administer a poison or use any other means whatsoever, with the intent to procure a miscarriage of a woman, whether she be pregnant or not.
- (c) For anybody,
unlawfully,
to supply any poison or instrument or other thing, knowing that the same is intended to be unlawfully used with intent to procure a miscarriage of any woman, whether she be pregnant or not.

A charge of murder or manslaughter may be brought against any person if a woman dies as a result of an attempt by that person to procure her miscarriage.

Points to note are:

- (1) The law uses the word "miscarriage" only and includes in the term the emptying of the pregnant uterus at any time.
- (2) The word "unlawful" is not defined, nor is a "lawful" emptying of the uterus.
- (3) The attempt to empty a uterus by a second person is a crime, even though the uterus does not contain the products of conception.

- (4) It is immaterial whether the attempt is successful or unsuccessful.
- (5) As the law refers to the unlawful use of drugs or instruments it is arguable that a "lawful" use is contemplated, though strictly speaking, there is in law, no such thing as justifiable abortion. On the other hand, the law does not forbid the procurement of abortion where it is necessary to save the mother's life. Each case is considered by the Courts on its own facts and circumstances.

The established practice of the surgeon is never to empty a uterus without first having a second opinion that it is necessary. An opinion in writing is to be preferred and it is as well also to get the written consent of the woman and her husband.

Appendix VIII

Epitome of the Rules of the Central Midwives Board*

The Midwives Act, 1902, S.3(1) placed on the Central Midwives Board a duty to frame rules:

- (a) regulating its own proceedings;
- (b) regulating the issue of certificates and the conditions of admission to the roll of midwives;
- (c) regulating the course of training and the conduct of examinations and the remuneration of the examiners;
- (d) regulating the admission to the roll of women already in practice as midwives at the passing of this Act;
- (e) regulating, supervising and restricting within due limits the practice of midwives;
- (f) deciding the conditions under which midwives may be suspended from practice;
- (g) defining particulars required to be given in any notice under S.10 of this Act.

The amending Midwives Acts enlarged in minor ways the powers of the Board to frame rules, but the published rules remained substantially the same as they were in 1902 until October, 1947. Since then, there have been many revisions and consolidations.

Section E of the rules, "regulating, supervising and restricting within due limits the practice of midwives", is particularly important for the student since it contains directions relating to the midwife's professional duties. So far as the practising midwife is concerned, many of the rules in other sections are intended for reference only, but every midwife is expected to be familiar with Section E. It is this Section which has been issued in an entirely revised form.

A feature of successive revisions of Section E of the rules of the Board has been their progressive liberalisation and simplification. Particularly since 1947 detailed rules of practice have been omitted and the remaining rules "have been phrased in such a way that they indicate a general standard of professional work which it is desirable to maintain rather than setting out in precise detail the methods by which such a standard should be attained". At the same time the Board appended to the rules a series of notices which establish a code of professional practice. A midwife who fails to comply with them may be involved in a charge of misconduct or malpractice. The notices are not to be regarded as part of the rules but supplementary to them. They are intended to provide midwives with examples of the standard of practice which they are expected to attain.

Section E of the rules, *i.e.* rules regulating supervision and restricting within due limits the practice of midwives are now presented in three parts. Part I contains rules applicable to all midwives: Part II—

* A handbook incorporating the Rules of the Central Midwives Board, published in 1962, may be obtained from Messrs. Spottiswoode, Ballantyne & Co. Ltd., 1 New Street Square, London, E.C.4. Price 1s. 0d., by post, 1s. 4d.

rules relating to midwives in domiciliary practice: and Part III—rules relating to midwives practising in an institution (including a nursing home) which does not have a resident medical officer.

Parts I and II are reproduced in part below. Part III is not reproduced because it has much the same form and content as Part II, with minor differences making it appropriate to the conditions of institutional practice.

Part I. Rules Applicable to all Midwives

- (1) This rule relates to the proper designation of a midwife, *e.g.* State Certified Midwife (S.C.M.), Municipal Midwife, County Midwife.
- (2) This rule requires a midwife to notify any change of name and address to the Central Midwives Board.
- (3) This rule defines “practising midwife”, “lying-in period” and “domiciliary practice”.

NOTIFICATION OF INTENTION TO PRACTISE AS A MIDWIFE

- (4) Whenever a midwife intends to practise she shall send to the local supervising authority the form prescribed in Form (a) of the Schedule duly completed and signed by her, and shall give a like notice in the month of January in every year thereafter during which she continues to practise in that area!

TREATMENT OUTSIDE A MIDWIFE'S PROVINCE

- (5) (a) A practising midwife must not, except in an emergency, undertake any treatment which is outside her normal province. The question whether in any particular case such treatment was justified will be judged on the facts and circumstances of the case.
- (b) A practising midwife must not on her own responsibility use any drug, including an analgesic, unless in the course of her training, whether before or after enrolment, she has been thoroughly instructed in its use and is familiar with its dosage and methods of administration or application.
- (c) A practising midwife must not, except on the instructions and in the presence of a registered medical practitioner, administer an inhalational analgesic otherwise than by means of an apparatus which is of a type approved by the Board for use by midwives, and, where the Board so directs in relation to particular types of apparatus, has been inspected and approved by or on behalf of the Board, within such a period before the date of administration as the Board shall from time to time determine, as fit for use by midwives.
- (d) A practising midwife must not, except on the instructions and in the presence of a registered medical practitioner, administer an inhalational analgesic by means of an apparatus which is required by this rule to have been inspected and approved within a specified period before the date of use unless there is

- in the possession of the body or person by whom the apparatus is held a certificate signed on behalf of the Board certifying that the apparatus was inspected and approved by or on behalf of the Board on a date falling within the appropriate period, as fit for use by midwives.
- (e) A practising midwife must not, except on the instructions and in the presence of a registered medical practitioner, administer an inhalational analgesic unless:
- (i) she has, either before or after enrolment received at an institution approved by the Board for the purpose, special instruction in the essentials of obstetric analgesia and has satisfied the institution or the Board that she is thoroughly proficient in the use of the apparatus; and
 - (ii) the patient has at some time during the pregnancy been examined by a registered medical practitioner who has signed a certificate that he finds no contra-indication to the administration of the analgesic by a midwife and, if any illness which required medical attention subsequently developed during pregnancy, the midwife obtained confirmation from a medical practitioner that the certificate remained valid: and
 - (iii) one other person, being any person acceptable to the patient, who in the opinion of the midwife is suitable for the purpose, is present at the time of the administration in addition to the midwife.
- (f) Unless special exemption is given by the Board to enable particular institutions to investigate new methods, a midwife must not administer any anaesthetic otherwise than on the instructions and in the presence of a registered medical practitioner.
- (6) When a practising midwife administers or applies in any way any drug, other than an aperient, she must forthwith make a proper record in her personal register of cases or in any other record or register which incorporates the requirements prescribed in the approved form, of the name and dose of the drug, and the date and time of its administration or application.

Part II. Rules Relating to Midwives in Domiciliary Practice

- (7) This part of Section E of the Rules relates to midwives in domiciliary practice.

INSTRUCTIONS OF MEDICAL PRACTITIONER RESPONSIBLE FOR THE CASE

- (8) If a midwife is acting in a case in which a registered medical practitioner is also engaged she must carry out such instructions concerning the care of the patient and the infants as may be given to her by the practitioner subject to compliance with the rules of the Board.

REGISTER OF CASES

- (9) A practising midwife must enter in a personal register of cases kept in a form approved by the Board, particulars of every case at which she is in professional attendance, including particulars of drugs required by Rule E.6.

RECORDS OF PREGNANCY, LABOUR AND LYING-IN PERIOD

- (10) A practising midwife must keep records of her observations and treatment of her patient during pregnancy, labour and the lying-in period, and of the infant, using for such purposes either the form prescribed by the Board from time to time, or a form in which such prescribed form is incorporated without amendment.

PRESERVATION OF RECORDS

- (11) A midwife must not destroy, or arrange for the destruction of, official records made whilst she is in professional attendance on a case and required to be kept by these Rules. If she finds it impossible or inconvenient to preserve them she must transfer them to the local supervising authority.

FACILITIES FOR INSPECTION

- (12) A practising midwife must give to the medical officer of health of the local supervising authority or any registered medical practitioner on the staff of such authority or any supervisor of midwives of the local supervising authority to which such midwife is required to send a notice in accordance with Rule E.4 every reasonable facility for the inspection of her methods of practice, her personal register of cases and other records, her appliances and such part of her residence as is used for professional purposes. When the authority deem it necessary for preventing the spread of infection she must allow herself to be medically examined.

CALLING IN MEDICAL AID

- (13) A practising midwife must call in a registered medical practitioner in all cases of illness of the patient or infant or in the case of any abnormality becoming apparent in the patient or infant during pregnancy, labour or the lying-in period. She must also send or hand to the registered medical practitioner the form prescribed in Form (b) of the Schedule properly filled in and signed by her. The conditions referred to in this Rule shall be deemed to be emergencies for the purpose of Section 14 of the Act.
- (14) Whenever medical aid has been called in for the patient or infant whether by the midwife or by the patient or by the patient's friend or relative, the midwife must notify the local supervising authority of the area in which the patient is residing for the time being by sending to them forthwith a copy of the form prescribed in Form (b) of the Schedule.

- (15) (a) If a registered medical practitioner has been called in and attends on account of an emergency as defined in Rule E.13 the midwife must obtain her instructions direct from such practitioner and must carry out the instructions she receives. If the midwife receives oral instructions she must keep a note of such instructions in her records.
- (b) If the emergency for which medical aid has been called in threatens immediate danger to the life of the patient or infant, the midwife must remain with and do her best for the patient and infant until the crisis has passed.
- (16) Notwithstanding any previous compliance with Rule E.13 a midwife must again call in a registered medical practitioner if during pregnancy, labour or the lying-in period a new emergency arises, and fill in and sign in respect of the new emergency the form prescribed in Form (b) of the Schedule, following the procedure laid down in Rule E.13.

DISINFECTION

- (17) If a practising midwife has been in contact with a person, whether or not a patient, suffering from any condition which is or may reasonably be suspected to be infectious, or if she herself is liable to be a source of infection, she must without delay notify the local supervising authority or authorities of the fact, using for the purpose the form prescribed in Form (c) of the Schedule, and before going to any maternity patient she must, unless the authority relieve her of the obligation, carry out or allow to be carried out to the satisfaction of the local supervising authority such measures of disinfection as the local supervising authority may prescribe.

NOTIFICATION OF DEATHS AND STILLBIRTHS

- (18) If the patient or infant dies or if the infant is stillborn a practising midwife who was present at the time of death or stillbirth or who was called in immediately afterwards must, whether or not a registered medical practitioner was present at the same time, notify the local supervising authority of the death or stillbirth, using for the purpose the form prescribed in Form (d) of the Schedule.*

LAYING OUT A DEAD BODY

- (19) A midwife must not lay out a dead body for burial except in the case of a patient upon whom she has been in attendance at the time of death in the capacity of a midwife or nurse.

* (i) The duty of the midwife in relation to the local supervising authority in accordance with this Rule is additional to the duty of the midwife in relation to various authorities under the Births and Deaths Registration Acts, the Public Health Act, 1936, and the Public Health (London) Act, 1936.

(ii) An infant is stillborn when it has issued forth from its mother after the twenty-eighth week of pregnancy and has not at any time after being completely expelled from its mother breathed or shown any other signs of life.

(iii) See Notice No. 10 at the end of this Section of the Rules.

Special attention is drawn to two of the notices concerning a midwife's code of practice, namely Notice 2, which deals with drugs which may be carried and used by midwives and Notice 9, which deals with calling in of medical aid.

DRUGS WHICH MAY BE CARRIED AND USED BY MIDWIVES

Subject to any special instructions which may be given to her by the local supervising authority or other body employing her, the drugs and preparations which should ordinarily be carried by a midwife are given as:

- (1) Antiseptics.
- (2) An aperient.
- (3) Cardiac and respiratory stimulants.
- (4) A preparation of ergot for intramuscular injection.
- (5) Sedatives and analgesics.

It is pointed out that this list of drugs is not intended to be complete and that a midwife "must observe the requirements of the Dangerous Drugs Regulations".

These Regulations, made under the Dangerous Drugs Acts, 1920-32, relate to the manufacture, distribution and use of opium, its derivatives and certain other dangerous drugs.

Under the regulations a midwife cannot obtain opium unless she has given notice of intention to practice; and she is required to enter in a book to be kept solely for the purpose, particulars of all supplies obtained, including the date, quantity, and name and address of the person from whom obtained.

It will be recalled that in addition a midwife is required under Section E of the Rules of the Board to make a proper record of the names and dose of the drug and the time of its administration or application.

CALLING IN OF MEDICAL AID

Notice 9 draws attention to the importance of the strictest observance of the provisions of the Rules relating to the calling in of medical aid, and reminds midwives of the arrangements for maternity medical services in the National Health Service, particularly to the published list of medical practitioners having obstetric experience.

The notice goes on to state that when the midwife summons medical aid under the Rules of the Board, the following practice should be observed:

- (a) if a medical practitioner has accepted responsibility for the maternity medical service of the patient or has attended her ante-natally and indicated willingness to accept responsibility at the confinement if required, he should be called in;
- (b) if such a medical practitioner or his deputy is not available or if the patient has no doctor who has accepted responsibility for her under the preceding paragraph, the midwife should call in some other medical practitioner having obstetric experience whose name is

included in the above-mentioned list, but if no such medical practitioner is available the midwife should call in any other registered medical practitioner whose services can be secured.

- (c) In any circumstances in which the midwife is required to summon medical aid under the Rules of the Board after the 14th day, but before the 28th day of the lying-in period, the medical practitioner providing general medical care or, if he is not available, any other registered medical practitioner should be called in.

Appendix IX

Note on the Recent Thalidomide Incident

A preparation of German manufacture, thalidomide was freely used as a sedative in Britain between 1958 and 1961. It was regarded as a useful drug, and believed to be safe until its association with congenital limb deformities was suspected late in 1961.

Retrospective enquiries in Germany and Britain have confirmed that the taking of thalidomide by the expectant mother, particularly during the fourth to sixth weeks of pregnancy might have harmful effects upon the developing embryo.

The typical congenital malformations associated with the administration of the drug are reduction deformities of the limbs (stump-like or vestigial limbs), malformations of the ears and eyes and deformities of the alimentary system. The affected children appeared to have normal intelligence.

The total number of affected babies is not known precisely, but from special surveys conducted by the Ministry of Health, it would appear to be of the order of 100–150 in Britain.

Affected infants need special care and treatment, including an assessment of the child's disabilities by a team of experts, the provision of artificial limbs and special appliances, and the provision of specially designed clothing because of the tendency to sweat excessively owing to the reduced body surface. The parents of the affected children need sympathy, understanding, and support to enable them to accept the child and to strike a balance between over-indulgence on the one hand, and withdrawal from a situation which may at first appear intolerable.

Appendix X

Examples of

Voluntary Associations, etc.

CONVALESCENTS' HOMES AND HOSTELS.

A proportion of the rehabilitation of sick and injured persons in Britain is carried out in voluntary institutions. They include convalescents' homes for mothers and children and hostels for unmarried mothers.

THE BRITISH DIABETIC ASSOCIATION.

Address: 3-6 Alfred Place, London, W.C.1.

FAMILY SERVICE UNITS.

Address: 25 St. Mary's Grove, London, N.1.

THE CENTRAL COUNCIL FOR HEALTH EDUCATION.

Address: Tavistock House, Tavistock Square, London, W.C.1.

Aims: To co-ordinate all agencies for health education, to advise and assist local authorities in health education work. "The Central Council provides expert advice on all health education subjects, supplies posters and leaflets, and organises regional lecture courses for Local Authorities."

THE DISTRICT NURSING ASSOCIATIONS.

The District Nursing Associations in town and country employ trained nurses to attend patients in their own homes. In rural areas they employ nurse-midwives who practise midwifery as well as general nursing. Many Associations are affiliated to the Queen's Institute of District Nursing.

THE EUGENICS SOCIETY.

Address: 69 Eccleston Square, London, S.W.1.

Aims: To study the inherited qualities of mankind and their improvement.

THE FAMILY PLANNING ASSOCIATION.

Address: 231 Tottenham Court Road, London, S.W.1.

Aims: To bring medical advice on family planning within the reach of every family. Two-thirds of the Association's 500 clinics are held on local authority premises. Their functions include family spacing, family limitation, and advice and treatment for sub-fertility.

THE NATIONAL ADOPTION SOCIETY.

Address: 47a Manchester Street, London, W.1.

Aims: To find babies for childless people and homes for unwanted infants. The Society helps in legal adoption procedure.

THE NATIONAL ASSOCIATION FOR MATERNITY AND CHILD WELFARE

Address: Tavistock House North, Tavistock Square, London, W.C.1.

Aims: The furtherance of education in matters connected with maternity and child welfare; the publication of books, journals, statistics and reports; the organisation of conferences and meetings; and acting as a consultative body in connection with maternity and child welfare.

THE NATIONAL ASSOCIATION FOR MENTAL HEALTH.

Address: 39 Queen Anne Street, London, W.1.

THE NATIONAL COUNCIL OF SOCIAL SERVICE

Address: 26 Bedford Square, London, W.C.1.

THE NATIONAL COUNCIL FOR THE UNMARRIED MOTHER AND HER CHILD.

Address: 21 Coram Street, London, W.C.1.

THE NATIONAL MARRIAGE GUIDANCE COUNCIL.

Address: 78 Duke Street, London, W.1.

Aims: To give education in preparation for marriage, with personal advice in individual cases, and to undertake and encourage the study of marriage as a social institution.

NATIONAL SOCIETY FOR MENTALLY HANDICAPPED CHILDREN.

Address: 8 Balstrode Street, London, W.1.

THE NATIONAL OLD PEOPLE'S WELFARE COUNCIL.

Address: 26 Bedford Square, London, W.C.1.

NATIONAL SOCIETY FOR CLEAN AIR.

Address: Field House, Breams Buildings, London, E.C.4.

THE NATIONAL SOCIETY FOR THE PREVENTION OF CRUELTY TO CHILDREN.

Address: Victory House, Leicester Square, London, W.C.2.

The Society has branches all over the country and employs a staff of full-time inspectors.

Aims: To prevent the public and private wrongs of children and the corruption of their morals, and to take legal action for their protection.

THE NATIONAL SPASTICS SOCIETY.

Address: 28 Fitzroy Square, London, W.1.

THE QUEEN'S INSTITUTE OF DISTRICT NURSING.

Address: 57 Lower Belgrave Street, London, S.W.1.

Aims: To provide the best possible nursing for the sick poor in their own homes. The Institute gives training in district nursing and midwifery and conducts systematic inspections of district nurses.

THE ROYAL SOCIETY OF HEALTH.

Address: 90 Buckingham Palace Road, London, S.W.1.

THE ROYAL SOCIETY FOR THE PREVENTION OF ACCIDENTS.

Address: Terminal House, 52 Grosvenor Gardens, London, S.W.1.

THE UNITED KINGDOM COMMITTEE FOR THE WORLD HEALTH ORGANISATION.

Address: c/o London School of Hygiene and Tropical Medicine, Keppel Street, London, W.C.1.

Appendix XI Specimen Questions

1. Write a short essay on what a district midwife can do to contribute to improvement in general health and amelioration of social conditions.
2. Give a short account of
 - (a) The Dangerous Drugs Acts, 1920–1932, with special reference to the requirements of a midwife in practice.
 - (b) The rules of the Central Midwives Board regarding drugs.
3. What special points should a midwife make when discussing with a mother the advantages of vaccination in infancy?
What is the law concerning vaccination?
4. What benefits are available to expectant and nursing mothers?
For whom are they available and how does the beneficiary apply for them?
Comment on the benefits in their relation to the medical need.
5. Give a concise account of the following:
 - (a) The law relating to the adoption of children.
 - (b) The notification of births.
 - (c) The registration of stillbirths and deaths.
6. Define: Spontaneous abortion; criminal abortion; therapeutic abortion.
Discuss briefly the law relating to criminal abortion.
7. Discuss as with a class of pupils the objects of ante-natal care.
8. What do you understand by:
 - (i) The birth rate.
 - (ii) The maternal mortality rate.
 - (iii) The infant mortality rate?Give the latest rates you know for England and Wales for
 - (a) The maternal mortality rate;
 - (b) The infant mortality rate.
9. What steps should a midwife take when she suspects that a person whom she is about to deliver is suffering from venereal disease?
What provision is made by the State for the diagnosis, treatment and control of venereal diseases?
10. Write an account of:
 1. The Legitimacy Act, 1926.
 2. An affiliation order.
11. What are the duties of a midwife on the occurrence of a case of ophthalmia neonatorum in her district practice?
What facilities may be provided for the treatment of such cases?
12. An unmarried pregnant woman, being obliged to return to work as soon as possible after the confinement, has made arrangements for a foster mother to receive her baby when ten days old. What points in connection with this case should form the subject of special instruction to the pupil midwife whose patient the woman will be?
13. Set out briefly what you would instruct your pupils regarding:
 - (a) The duties of the following officers:
 - (i) A Supervisor of Midwives.

- (ii) A Health Visitor.
- (iii) A Lady Almoner of a Hospital.
- (b) The functions of the following bodies:
 - (i) The Ministry of Health.
 - (ii) The Central Midwives Board.
 - (iii) A Local Supervising Authority under the Midwives Acts.
- 14. Define the terms "Nursing Home" and "Maternity Home". Enumerate the main points in the Public Health Act, 1936, on the registration of Nursing Homes and Maternity Homes.
- 15. What is the law relating to the employment of women after confinement?

Assuming you had to advise as to the amendment of such laws, discuss the alterations you would propose for protecting the health of expectant and nursing women in employment during the ante-natal and post-natal periods.
- 16. What instructions would you give pupils concerning the following:
 - (i) Maternity Benefit.
 - (ii) Legal adoption of children.
 - (iii) Help for unmarried mothers.
 - (iv) Boarded-out children.
 - (v) Children under 9 years of age received for reward.

To whom should a patient apply for information in connection with each of these matters?
- 17. Give a brief summary of the provisions of the Midwives Act, 1936.
- 18. A pupil midwife hopes, after obtaining her Certificate, to open a Maternity Home to accommodate about six cases, and asks your advice on the matter. What advice will you give her as to the law relating to Maternity Homes, and as to the probable requirements she would have to meet?
- 19. You are a supervisor of midwives. One of the district midwives on your staff reports to you that a mother whom she delivered 3 days ago has a rise of temperature which is notifiable. What questions would you ask the midwife and what advice and instruction would you give to her?
- 20. Why is it essential for a midwife to have an intelligent understanding of the sociological and public health aspects of her work?

Give reasons from the point of view of (a) the Local Authority, and (b) the patient's family.
- 21. Draw an outline of a lecture on neo-natal mortality, and the midwife's part in its reduction.
- 22. When attending a maternity case, your patient asks your advice concerning:
 - 1. A water closet the flush of which will not act.
 - 2. A child of 7 years who is suspected of having enlarged tonsils and adenoids.
 - 3. A daughter aged 18 who is in difficulties over her National Health Insurance card.

To what official authority would you refer her in each of these cases

- and how would you advise her to proceed ?
23. Define (a) infant mortality rate and (b) neo-natal mortality rate. Give the main causes and indicate how you think they could be diminished.
 24. A case of acute tonsillitis occurs in a child of 4 years. What advice would you give:
 - (a) When it is known that the mother is 8 months pregnant;
 - (b) When it occurs in a household during the puerperium ?
 25. Set out a short talk to pupil-midwives on the responsibilities of a midwife for ante-natal care, dealing in particular with the public health and social aspect.
 26. Define for a class of pupil midwives:
 - (a) Pemphigus neonatorum;
 - (b) Ophthalmia neonatorum;and instruct them in their duties in connection with these conditions.
 27. What is a "deprived child" ?
What is being done to help these children ?
 28. Discuss the advantages and disadvantages of domiciliary confinements and hospital confinements from the point of view of the welfare of:
 - (a) The mother;
 - (b) The baby.
 29. A midwife may observe at the birth of a baby or subsequently that special supervision by the local health services may be necessary because the baby is "at risk". What are the most important conditions which would justify such supervision and give your reasons ?
 30. What effect, if any, has breast-feeding as compared with good artificial feeding on:
 - (a) the development of the teeth and mouth;
 - (b) the survival of premature infants;
 - (c) gastro-intestinal disorders;
 - (d) rickets, anæmia, scurvy;
 - (e) resistance to infection.
 31. Describe as briefly as possible the duties of local authorities in relation to food, including milk and water supplies.
 32. Give a short outline of the law relating to the notification of puerperal pyrexia.
Why was this condition made notifiable and what is the practice of local authorities regarding cases which have been notified ?
 33. What is a local health authority and what are its duties ?
 34. Describe fully the procedure which must be followed in order to have a child adopted.
 35. Describe the home help service.
 36. What kinds of voluntary social organisations exist for the benefit of the health and welfare of the community ?
Describe the functions of three of these bodies.
 37. A young girl is going to have an illegitimate child. She has informed you that she proposes to arrange for its adoption as soon as it is

born, and that therefore she does not propose to start breast-feeding. Taking into consideration the age, circumstances of the girl and her general conditions, what advice would you give her?

38. Write briefly what you know about the following:
 - (a) Notification of infectious diseases;
 - (b) Virus infections during pregnancy;
 - (c) The notification of births.
39. Give an outline of a talk to pupil-midwives about the rules of the Central Midwives Board.
40. Give an account of the maternity services provided by the local health authority under the National Health Service Act, 1946, referring particularly to the relations between these services and the midwifery services provided by the regional hospital board.
41. Write an account of recent legislation relating to health, welfare and social services seen as a whole.
(Your account should be presented in a form which would bring out clearly the main points at a class lecture.)
42. What do you teach pupil-midwives about the types of analgesics which may be used by a midwife and how to deal with supplies and records?
43. Give the outline of a talk to a group of expectant mothers on the importance of diet during pregnancy.
44. What arrangements exist for the supply of special foods and food supplements to expectant and nursing mothers and young children?
How are they obtained?
What is their nutritional value?
45. What are the functions in relation to maternity and child welfare work of the following voluntary bodies:
 - (i) The Central Council for Health Education
 - (ii) Marriage Guidance Council
 - (iii) National Society for the Prevention of Cruelty to Children
 - (iv) Women's Voluntary Services?
46. What are the duties of a non-medical supervisor of midwives?
47. Why is it essential for a midwife to have a basic knowledge of the Public Health and Social Services?
48. What instructions would you give pupil-midwives on the prevention of infection in domiciliary midwifery with regard to mother and infant?
49. What would you teach a pupil-midwife about the keeping of records?
50. What part is played in the National Health Service by the following bodies:
 - (i) Hospital Management Committee
 - (ii) Local Executive Council
 - (iii) County or County Borough Council?
51. Outline a talk to pupil-midwives on the part played by the Midwives Acts in the evolution of the midwifery profession during the last fifty years.
52. What advice should a midwife give in the course of her work to a

mother on the prevention of accidents to her baby during its first year?

53. Describe briefly the duties of the following:

- (i) N.S.P.C.C. Officer
- (ii) Children's Officer
- (iii) Duly Authorised Officer
- (iv) Probation Officer
- (v) Moral Welfare Worker

54. What advice and help is available to unmarried mothers before and after confinement?

55. What would you consider the essentials of an adequate premature-baby service?

56. Outline the respective advantages and disadvantages of institutional and home confinement.

In what circumstances would you advise that a confinement should take place in an institution?

57. By what means may a midwife alleviate pain in normal labour? What regulations must be observed in each case?

58. Give an account of three recommendations of the Cranbrook Report that you consider to be important.

59. What are the duties of the following:

- (a) A general practitioner obstetrician?
- (b) A mental welfare officer?
- (c) A home help organiser?

60. Assuming the ante-natal care of a patient is shared between the doctor and the midwife what should be the special contribution from the midwife?

61. How may local health authorities and hospitals co-operate to provide the best care for premature babies born at home?

62. Explain briefly the duties to the local supervising authority of:

- (a) a domiciliary midwife.
- (b) a hospital midwife.

63. Discuss the social medical factors known to influence peri-natal mortality.

64. What arrangements should be made for the mother discharged early from hospital?

65. What would you teach a pupil-midwife about the keeping of records?

How would you stimulate her interest and understanding of the value of keeping them accurately?

66. What would you teach a pupil-midwife about assessing premises:

- (a) for home confinement?
- (b) for early discharge of mother and baby from hospital?

67. Explain to a pupil-midwife in second period training the responsibilities of the district midwife to the following:

- (a) the expectant mother booked for home confinement,
- (b) the general practitioner obstetrician,
- (c) the Local Health Authority.

68. Outline a model immunisation programme for childhood. Indicate how you would persuade a mother to accept the programme.
69. Describe and discuss present arrangements for detecting early cancer of the cervix.
70. Are the functions of the health visitor and social worker complementary or confused in Britain?
71. Discuss the relation between family size and poverty. How effective are Family Allowances in dealing with this problem?
72. Debt is said to be a cause of the break-up of families. Discuss this statement and mention agencies which might help with the problem.
73. What might be done to help men to prepare for and adjust to retirement?
74. The ideal location for a health visiting service is with a group of General Medical Practitioners. Discuss this statement.
75. The organisation of the mental health services is changing rapidly. Discuss the changes in relation to the community.
76. What social needs do you think should be considered in the designing of a new housing estate?
77. Outline recent changes in the incidence of venereal diseases in Britain and discuss reasons for them.
78. Discuss the medical problems associated with the increasing number of elderly people in the population.
79. Discuss the influence of hereditary and environmental factors on intelligence.

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